





# CHURCH STRETTON PRIVATE ASYLUM, SHROPSHIRE.

This institution is exclusively for the reception of Gentlemen of the Upper and Middle Classes. Its popularity and success must be attributed in a great measure to the open manner in which it is conducted; instead of being a place to be avoided, as asylums were in times past, it is the resort of the better class families for recreation and amusement, and we are of opinion that the proprietor has taken a step in the right direction, and one that will still further command the confidence of the public by providing accommodation for the friends of patients, who will thus have an opportunity of satisfying themselves as to the mode of treatment and the comforts afforded. The charges are moderate, being from a Guinea per week upwards, according to the requirements of the patients.—From the *Shrewsbury Press*.

CHURCH STRETTON is situated in the Highlands of Shropshire, amidst the most charming hill scenery, and has a very invigorating and bracing atmosphere.

One great object of this institution is to find healthy and congenial occupation for its patients, and thus assist the special medical treatment. Attached to the House is a large Farm and extensive Grounds. Patients amuse themselves with Farming, Gardening, Riding, Driving, Cricket, Tennis, and are encouraged to find diversion in every sort of Amusement. Medical men and friends of patients are particularly invited to visit this Asylum, and form their own opinion on the treatment, which has met with the greatest success.

A Specialty is made of the Treatment of Lunacy arising from, or complicated with Inebriety, and the Opium habit. To this class very particular attention is given.

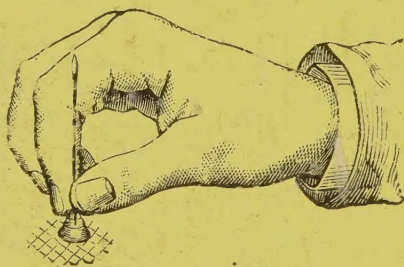
*Apply to the Superintendent, CAMPBELL HYSLOP.*

[12

DR. CECIL A. P. OSBURNE, *Medical Supt.*

DR. THEO. B. HYSLOP, *Asst. Med. Supt.*

THE ASSOCIATION  
PIN-POINT.



REGISTERED.

## The Association for the Supply of Pure Vaccine Lymph,

12, PALL MALL EAST, LONDON, S.W.

SOLE AGENTS FOR

### DR. WARLOMONT'S CALF VACCINE.

Tubes, 2s. each; Half Tubes, 1s. each. Pomade in Vials, 5s.

HUMAN VACCINE (from Healthy Children only, microscopically examined and  
Tubes one-third full and Lancet  
Charged Small Points, 5s.  
e, but without source) in



22101686626

Westmi  
DARKE,





# NEW DIETETIC PREPARATIONS.

---

## CARNRICK'S LIQUID PEPTONOIDS

(Digested Beef, Milk, and Gluten in Good Sherry).

The above preparation represents Beef Peptonoids entirely digested and ready for assimilation. It is a highly nourishing liquid stimulant, containing albuminoids, in the form of fibrin, gluten, and caseine. In flavour and palatability it may be compared to a delicate wine or cordial. Liquid Peptonoids yields excellent results in Convalescence, General Debility, Dyspepsia, and all cases of failure to retain food. Diluted and acidulated with phosphoric acid, it makes a most pleasant and nutritious beverage in cases of fever.

"We consider the preparation a very valuable condensed food."—*The Lancet*.

---

## Carnrick's Soluble Food

FOR INFANTS, INVALIDS, AND AGED PERSONS.

**FORMULA.**—Fifty per cent. of the constituents of Milk (the caseine being digested with pancreatine); Fifty per cent. of Wheat (the starch being converted into dextrine and dextrose).

---

"The great objection to Malted Foods for Infants is successfully met, as dextrine will not undergo alcoholic or acid fermentation as will malt sugar."—**PROF. JAS. DUGGAN.**

"In my opinion, Carnrick's Soluble Food is much better for nourishing children than any other infant's food I have ever seen."—**PROF. STUTZER, Analyst to the Imperial Government, Bonn, Rhenish Prussia.**

"Carnrick's Soluble Food closely imitates in composition an average sample of human milk."—*British Medical Journal*.

**DR. A. W. WALLACE** writes:—"In it milk is peptonized, and is mixed with wheat in such proportion as to imitate very exactly the proportions of caseine, sugar, and fat in human milk. The mixture is dried, and is reduced to a fine powder. It is only necessary to mix it with water and boil for a short time to have a most digestible liquid food, suitable either for infants or invalids. In point of taste, it is the only unobjectionable form of peptonized food we have ever met with."

---

CARNRICK & CO., LIMITED, [15

24 & 25, HART ST., BLOOMSBURY, LONDON, W.C.



THE FINEST TABLE WATER IN THE WORLD.

66

A  
NATURAL  
WATER

JOHANNIS

66

CHARGED  
WITH  
NATURAL  
GAS.

THE NEW NATURAL SPARKLING TABLE WATER.

CLEAR AS CRYSTAL. CRISP AND COOLING.

An Enemy to Gout and Rheumatism. A Friend to Digestion and Circulation.

JOHANNIS, which is obtained from a Spring of that name situate at Zollhaus, in the province of Nassau, is the most agreeable Table Water yet introduced. The Spring, which bubbles up with great force from an immense depth, is itself chemically pure, and is abundantly charged with carbonic acid gas of the utmost purity. When drank by itself, its freshness on the palate renders it most refreshing and agreeable; while it is excellent mixed with all wines, especially claret, spirits, cider, and temperance drinks. In addition to the satisfaction which it is sure to give when used as an ordinary Table Water, JOHANNIS has a great medicinal value. It is highly recommended in cases of Indigestion and Loss of Appetite, and a glass taken on getting up in the morning will be found a great help to eating a hearty breakfast. It quickens the circulation of the blood, and is, therefore, especially beneficial to all people of sedentary occupation. Its alkaline constituents render it a most valuable Table Water for Dyspeptic and Gouty subjects. Especially should it be noted that mixed with milk it forms a most agreeable and wholesome drink for children.

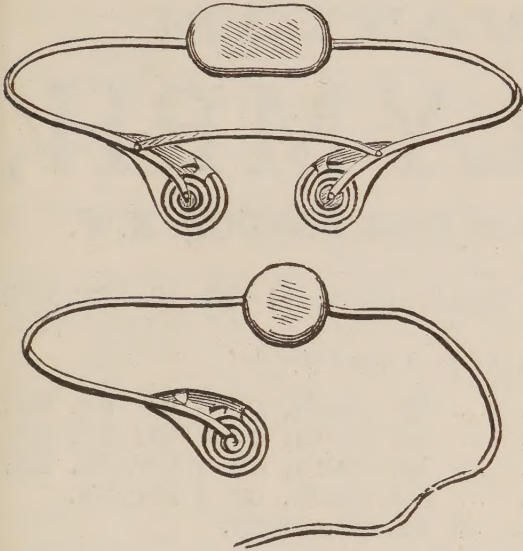
*Sold only in the Original Cases, which are Packed at the Spring.*

[21]

JOHANNIS NATURAL MINERAL WATER COMPANY, Limited, 5 Great Winchester Street, E.C.



# The Latest Improvement in Trusses.



## WM. COLES & CO.,

INVENTORS AND PATENTEES

OF THE

## Spiral Spring Truss.

Also Special Adaptation

FOR THE

Support of Floating Kidney.

225, PICCADILLY, W. (*late 3, Charing Cross*),

*Two Doors from "The Criterion."*

PARTICULARS, &c., GRATIS BY POST.

BY ROYAL



LETTERS PATENT

PURE WATER

MAIGNEN'S

"FILTRE RAPIDE"

PERFECT HEALTH

Contractors to Her Majesty's Government.

## Thirty Gold Medals AND DIPLOMAS.

First Prize in every Contest.

### FOR PURIFYING DRINKING WATER.

The only Filter which will remove from Water all Germs of Disease and Metallic Impurities.

THOUSANDS OF TESTIMONIALS.

"A better Filter could not be desired."—*The Lancet*.

"It filtered the water both quickly and well, and was much valued by our soldiers."—LORD WOLSELEY, Nile Expedition.

PRICES. FROM HALF-A-GUINEA UPWARDS.

Full Particulars Post Free.

SOLD BY CHEMISTS AND IRONMONGERS EVERYWHERE

MAIGNEN'S "FILTRE RAPIDE" AND "ANTI-CALCAIRE" CO., LIMITED

(The Largest Manufacturers of Filters in the World.)

[25]

32, ST. MARY-AT-HILL, EASTCHEAP, LONDON, E.C.



# DR. RENNER'S ESTABLISHMENT FOR **VACCINATION** WITH **CALF LYMPH,** 186 (late 228), Marylebone Road, LONDON, N.W.

VACCINATION FROM THE CALF DAILY, FROM 11 TO 12 O'CLOCK.

## PRICE OF CALF LYMPH.

TUBES	{	Large	...	...	...	...	2s. each, or 3 for 5s. 6d.
		Small	...	...	...	...	1s. each, or 3 for 2s. 9d.
POINTS	{	Large	...	...	...	...	1s. each, or 3 for 2s. 6d.
		Small	...	...	...	...	9d. each, or 3 for 2s.
SQUARES		..	.	...	...	...	2s. 6d. each.

*Registered Telegraphic Address: "Vaccine, London."*

Sent on receipt of remittance addressed to the Manager of the Establishment;  
or all Chemists throughout the United Kingdom. [26]

## NORTHGROVE, HAWKHURST, KENT (WEALD).

**T**HIS Asylum or Mental Sanatorium, established forty-seven years ago, is situate in the pretty and well-known village of Hawkhurst (and Post Town), midway between Tunbridge Wells and Hastings. Ten years since, twenty-five rooms were added, the plans having been duly sanctioned by the Authorities. In the extensive grounds are two houses, one for the reception of special or convalescent cases, and the other is used as a Cottage Hospital.

This Asylum is an excellent home for middle-aged and elderly invalids, and is replete with all the modern comforts and advantages so necessary for the treatment of mental diseases.

Patients can keep their own carriages and horses, &c.

Terms are strictly moderate.

Dr. W. MILSTED HARMER, F.R.C.P.E., who has been twenty-two years Physician Superintendent, will be pleased to give any information as to the admission of patients, and also to consult with any medical practitioner at the Asylum previous to the admission of a patient.

Railway Station, Etchingham, on the Tunbridge Wells and Hastings Branch, South Eastern Railway. Omnibuses to and from the Station twice a day; fare one shilling.



# MESSRS. MACMILLAN AND CO.'S PUBLICATIONS.

WORKS BY T. LAUDER BRUNTON, M.D., D.Sc., F.R.S.

*Adapted to the New British Pharmacopœia, 1885.*

**A Text-Book of Pharmacology, Therapeutics, and Materia Medica.** Adapted to the United States Pharmacopœia. By F. H. WILLIAMS, M.D., Boston, Mass. Third Edition. Medium 8vo. 2 s.

**Pharmacology and Therapeutics: or, Medicine Past and Present.** 8vo. 6s.

**Tables of Materia Medica: A Companion to the Materia Medica Museum.**

New Edition. With Illustrations. 8vo. 10s. 6d.

**Disorders of Digestion: their Consequences and Treatment.** This Work contains, in addition to the Lettsoman Lectures, a number of other Papers by the Author on similar subjects. 8vo. 10s. 6d.

**A Text-Book of Physiology.** By MICHAEL FOSTER, M.D., Sec. R.S., Professor of Physiology in the University of Cambridge. Illustrated. Fourth Edition, 8vo. 21s.

*Now Ready, Third Edition, Enlarged.*

**The Practitioner's Hand-Book of Treatment: or, the Principles of Therapeutics.** By J. MILNER FOTHERGILL, M.D., &c. Third Edition, Enlarged. Demy 8vo. 16s.

**Pharmacographia: A History of the Principal Drugs of Vegetable Origin met with in Great Britain and India.** By F. A. FLUCKIGER, M.D., and D. HANBURY, F.R.S. Second Edition, Revised. 8vo. 21s.

**A Manual of Elementary Practical Histology.** By WILLIAM FEARNLEY. 7s. 6d.

*Now Ready. In 6 Vols. Royal 8vo. Price 31s. 6d. each.*

**The International Encyclopædia of Surgery.** A Systematic Treatise on the Theory and Practice of Surgery, by Authors of Various Nations. Edited by JOHN ASHHURST, Junr., M.D. In 6 Vols. Royal 8vo. Fully Illustrated.

*Complete in 5 Vols. Price £6.*

**A System of Medicine.** Edited by J. RUSSELL REYNOLDS, M.D., F.R.S., &c.  
**Practitioner: A Journal of Therapeutics and Public Health.** Edited by T. LAUDER BRUNTON, M.D., F.R.C.P., F.R.S.; DONALD MACALISTER, M.A., M.D., B.Sc., F.R.C.P.; and J. MITCHELL BRUCE, M.A., M.D., F.R.C.P. Half-yearly Vols. I.—XXXVIII. Price 1s. 6d. Monthly.

**Brain: A Journal of Neurology.** Edited for the Neurological Society of London, by A. DE WATTEVILLE. Published Quarterly. 8vo. 3s. 6d. each (Part I., January, 1878). Yearly Vols., I.—IX. Cloth, 15s. each.

MACMILLAN AND CO., LONDON.

[23

THE ORIGINAL AND LARGEST DEPÔT

FOR

# NEW AND RARE DRUGS

IS THAT OF

THOS. CHRISTY & CO., 25, Lime St., London, E.C.

## FLUID EXTRACTS.

Aletris.  
Baptisia.  
Boldo.  
Cascara Amarga.  
Do. Sagrada.  
Coca.  
Collinsonia.  
Cornus Florida.  
Damiana.  
Euphorbia.  
Grindelia.  
Hamamelis.  
Hydrocotyle.  
Jamaica Dogwood.  
Jurubeba.  
Kava-Kava.  
Kola.  
Liquor Ulex.  
Manaca.

## FLUID EXTRACTS (contd.).

Pichi.  
Pine.  
Salix Nigra.  
Viburnum.  
Yerba Santa.  
&c. &c.

## TINCTURES.

Lachnanthes.  
Lycopodium.  
Siegesbeckia.  
Simulo.  
Strophanthus.  
&c. &c.

## INFUSIONS.

Asteracantha.  
Burra Gokhru.  
Hygrophila.

## LOZENGES.

Cocaine Muriate,  $\frac{1}{16}$  grain.  
Papaine and Cocaine.  
Salix Nigra, 5 grains.

## SPECIALITIES.

Anderson's Vaginal Capsules.  
Cushman's Menthol Inhalers.  
Evodia Oil (Deodoriser for Iodoform).  
Jambul Perles.  
Kava-Kava (Fournier) Pills.  
Kola Chocolate.  
Kolatina.  
Papaine.  
Pine Extract for Baths.  
Thallin Urethral Antrophore.



# St. Helena Home.

Trained Nurses, Medical, Surgical, Monthly, Fever, and Mental,

*Sent out immediately on application, by Letter or Telegram, to*

THE LADY SUPERINTENDENT,

GROVE END ROAD, N.W. (Adjoining Lord's Cricket Ground).

Apartments for Invalids, who will have the advantage of Large and Airy  
Rooms and Skilled Nursing.

*Telegraphic Address—"HELENA," London.*

[10]

WORKS BY

## LAWSON TAIT, F.R.C.S.,

*President of the British Gynæcological Society.*

DISEASES OF THE OVARIES. 4th Edition ... ..	(nett)	7	6
DISEASES OF WOMEN. 2nd Edition ... ..	(nett)	7	6
A THOUSAND CASES OF ABDOMINAL SECTIONS ... ..		1	0
TWO ESSAYS ON EVOLUTION (reprints) ... ..		0	3
HOSPITAL MORTALITY ... ..		3	0

[3]

BIRMINGHAM: CORNISH BROTHERS, 37, NEW STREET.

Established]

### H. K. LEWIS

[1844.

MEDICAL PUBLISHER, BOOKSELLER AND PRINTER.

#### DEPARTMENTS.

**PUBLISHING.** Estimates for the complete production of Books, including Printing, Illustrations, Binding, &c., on application. Catalogue of Mr. Lewis's Publications post free on application.

**NEW SYDENHAM SOCIETY.** Translations of Standard Continental Medical Works. Report, with List of Works, post free.

**LIBRARY.** Medical and Scientific Library. Annual Subscriptions from One Guinea. Prospectus post free.

**BOOKS.** A Stock of the Leading Works of all Publishers sold at the largest Discount for Cash.

**PRINTING.** Books, Pamphlets, Testimonials, and all descriptions of Printing.

**OSTEOLOGY.** Fine Preparations at Lowest Prices. List on application.

[4]

H. K. LEWIS, 136, Gower Street, London, W.C.

## Electro-Medical Apparatus

For Galvanisation and Electrolysis, Faradisation, Franklinisation, Galvanic,  
Cautery and Electric Lighting.

K. SCHALL, 55, Wigmore Street, Cavendish Square,  
LONDON, W.

FULLY ILLUSTRATED PRICE LIST ON APPLICATION.

[14]



# Antiseptic Wound Dressings Factory,

Established (Edin. '72, Lond. '77) for the Manufacture of Dressings, under the instruction of Sir JOSEPH LISTER, on a large scale and at low cost.

AUTHORITIES OF INSTITUTIONS not already drawing their supplies therefrom should communicate at once with

**JOHN MILNE, ANTISEPTIC FACTORY, LADYWELL, LONDON, S.E.,**

Or send their orders, indicating Milne's Dressings, to any wholesale house in the world.

Surgeons are asked to demand MILNE'S (red cross) DRESSINGS, when **cheapest** and **best** will be supplied to their wards and patients.

Communications regarding new or improved forms of Dressings, occurring to Surgeons, are respectfully solicited. [29]

## SPRINGFIELD HOUSE ASYLUM, BEDFORD.

ONE hour from London by Midland. Elevated and Healthy Situation. Extensive Grounds (30 Acres). "Employment System." Carriage Drives, Billiards, Tennis, Boating, &c.

Forms of Admission from **DAVID BOWER, M.D.**

**Terms, 2 Guineas. No Extras.**

IN SEPARATE VILLAS, £200 TO £400 YEARLY.

N.B.—Two New Wings having been erected on plans approved by the Commissioners in Lunacy, there are now Vacancies for both Ladies and Gentlemen. [5]

## URETHRAL IRRIGATOR

**For the treatment of Gleet and the prevention of Stricture.**

This instrument, introduced by Mr. Reginald Harrison, Surgeon to the Liverpool Royal Infirmary (vide *Lancet*, 1880, p. 760) has now been used by many members of the Profession with satisfactory results. Retail 6s. 6d., to the Profession, 5s. 6d., post free. [11]

**SYMES & CO., LIVERPOOL.**

## DALRYMPLE HOME FOR INEBRIATES, THE CEDARS, RICKMANSWORTH, HERTS.

Licensed under the Habitual Drunkards Act, 1879. Patients received Privately and under the Act.

HONORARY CONSULTING PHYSICIANS:

B. W. RICHARDSON, M.D., F.R.S. | ALFRED CARPENTER, M.D., J.P.

NORMAN KERR, M.D., F.L.S.

RESIDENT MEDICAL SUPERINTENDENT:

R. WELSH BRANTHWAITE, L.R.C.P., M.R.C.S.

Opinions of the Press.

*The Times*.—"A very pleasant house standing in about five acres of beautiful grounds, admirably adapted to the purpose it is intended to fulfil."

Also recommended by the *Lancet*, *British Medical Journal*, *Medical Press*, *Sanitary Record*, *Morning Post*, *Standard*, *Daily News*, *Pall Mall Gazette*, *St. James's Gazette*, *Echo*, *Christian World*, *Church of England Temperance Chronicle*, *Alliance News*, *Temperance Record*, *National Philanthropist*, &c. &c.; and highly commended by the Government Inspector.

For Terms, apply to the Medical Superintendent, R. WELSH BRANTHWAITE, The Cedars, Rickmansworth, Hertfordshire. [19]



*In One Vol., large 8vo, with 30 Illustrations, 15s.*

CROSBY LOCKWOOD & SON, 7, Stationers' Hall Court, London, 1887.

# OUR TEMPERAMENTS:

## THEIR STUDY AND THEIR TEACHING.

### A POPULAR OUTLINE.

BY ALEXANDER STEWART, F.R.C.S. EDIN.

"It is impossible to doubt that with every temperament particular mental qualities are associated."—*Dr. Pritchard, F.R.S.*

"Not *Sanguine* and *diffusive* he,  
But *Biliary* and *intense*."

—*Carlyle, of Edward Irving.*

### CONTENTS.

CHAP. I.—PRELIMINARY. II.—GENERAL VIEW OF THE TEMPERAMENTS. III.—THE TEMPERAMENTS AND MIND. IV.—SCHEME OF THE FOUR PURE TEMPERAMENTS—A METHODICAL ARRANGEMENT OF THEIR PHYSICAL AND MENTAL CHARACTERISTICS. V.—OBSERVATIONS ON THE SCHEME. VI.—THE NERVOUS TEMPERAMENT. VII.—THE COMPOUND TEMPERAMENTS. VIII.—MODIFICATION OF THE TEMPERAMENT. IX.—THE ORGANS OF THE TEMPERAMENTS. X.—THE TEMPERAMENTS AVAILABLE IN EDUCATION. XI.—IN THE CHOICE OF A PROFESSION. XII.—IN THE PROMOTION OF HEALTH. XIII.—THE USE OF THE WORD TEMPERAMENT. XIV.—WORD, BIOGRAPHIC, OR TEMPERAMENT PORTRAITURE.

---

*From THE ASCLEPIAD, November, 1887.*

BY BENJAMIN WARD RICHARDSON, M.D., F.R.S.

"In this work Mr. Stewart tells us in his preface that he has endeavoured to construct from scattered and scanty material, and from his own observation, 'a practical guide by which observers may know the temperament of any one by looking at him, and associate with it certain mental qualities and traits of character.' The design thus briefly stated is carried out to the letter, in so very pleasant and practical a form, that readers of all classes may study the work with ease, and with an unusual amount of instruction. With commendable zeal and openness of mind, Mr. Stewart has gleaned from all the best sources of learning at his command the stray portions of recorded information on the temperaments which lie along the paths of medicine and science, and with good common sense and an evident love for his task has brought his materials into a condensed and yet agreeable form. His delineation of the four temperaments—the Sanguine, the Nervous, the Biliary, and the Lymphatic—is well sustained, as is also his description of the combinations of temperaments. . . . The work is richly illustrated with portraits, or, more correctly speaking, por-



OUR TEMPERAMENTS.

traitures, by which the representations of the different temperaments are faithfully portrayed. It commends itself especially to those who recognise that the 'greatest study of mankind is man.'"

---

*From THE JOURNAL OF MENTAL SCIENCE, July, 1887.*

" . . . . We commend Mr. Stewart's work as one containing much interesting information on a subject in regard to which medical psychologists ought to be well informed. Whatever can be brought together bearing upon the relation between the features and the character is valuable."

---

*From MIND, January, 1887.*

" . . . . His researches and observations will henceforth hold an important place among contributions towards the scientific classification of human types. . . . The most important addition made by the author to the general description of the temperaments is the assignment to them of definite form—characteristics; but the advance he has made in precision cannot be measured by single additions, as will be seen when the tables giving his definite results (pp. 77—80) are compared with the descriptions he quotes from the older authors. . . . The loose use of the word 'temperament' is criticised in an acute and interesting way; and the biographical value of real 'temperament portraiture' is illustrated both negatively and positively."

---

PUNCH.—"The volume is heavy to hold but light to read. Though Mr. Alexander Stewart has treated his subject exhaustively, he writes, at the same time, in a popular and pleasant manner that renders it attractive to the general reader. . . . Many people have assumed special temperaments though they have them not. Now, by the aid of this excellent guide, it is possible to find out all about them."

---

*The Daily Telegraph.*—"The book is exceedingly interesting, even for those who are not systematic students of anthropology."

---

*The St. James's Gazette.*—"It is, in any case, a delightful volume that is set before us, full of curious lore and suggestive thought."

---

*The Academy.*—"He is a charming expositor, with a power to infect others with his own interest and enthusiasm."

---

*The Guardian.*—"A very curious and instructive, as well as a very handsome book. . . . He has given us—what in this age of book-making is rare—an original as well as an interesting book."

---

*The Morning Post.*—"Hitherto there has been no distinct literature of the temperaments: it has been reserved to Mr. Stewart to initiate one. He has opened out a new ground of physiological study which will repay scientific men to peruse."



# St. Thomas's Home,

## ST. THOMAS'S HOSPITAL,

ALBERT EMBANKMENT, WESTMINSTER BRIDGE, S.E.

---

*Treasurer*—DAVID HENRY STONE, ESQ., ALDERMAN.

*Resident Medical Officer*—DR. EDMUNDS.

*Steward*—FREDERICK WALKER, ESQ.

---

This Home has been established for the reception of such persons as desire to avail themselves of the special advantages afforded by St. Thomas's Hospital, and who are able and willing to bear the *whole expense* which the treatment of their case involves.

---

### THE TERMS OF ADMISSION

ARE AS FOLLOW:—

1. The minimum charge, for Board, Medicine, Nursing, and Medical Attendance in the Home is at the rate of Eight Shillings a day, payable to the Steward of St. Thomas's Hospital weekly in advance. Patients will be charged only for the number of days they shall have remained in the Home.
2. The Treasurer and House Committee of St. Thomas's Hospital may determine the Patient's term in the Home by a week's notice, or less if necessary, upon a certificate by the Resident Medical Officer of the Home that the Patient is in a condition to be removed.
3. For ordinary Medical and Surgical Treatment the Patients are to be under the exclusive professional charge of the Resident Medical Officer of the Home; but they may, at their own expense, and subject to the rules of the establishment, employ any legally qualified Medical or Surgical Practitioner whom they may think proper as consultant with the said Resident Medical Officer, under the ordinary usages of consultation.
4. The Patients must in all respects conform to the regulations from time to time prescribed by the Treasurer and House Committee of the Hospital, for the due government and management of the Home, and all matters incidental to their position as Patients therein and removal therefrom.

*A Form of Application for Admission under these regulations may be obtained on application, either personally or by letter, to the Resident Medical Officer of the Home, who can be seen daily at 12 o'clock, or to the Steward, St. Thomas's Hospital, Albert Embankment, S.E.* [9



THE  
YEAR-BOOK OF TREATMENT  
FOR 1888.



# Recent Discoveries.

## SACCHARIN.

As all saccharine and starchy foods are interdicted in diabetes, *e.g.*, sugar, bread, rice, tapioca potatoes, peas, beans, carrots, turnips, parsnips, alcohol and most fruits, the diet in this disease hitherto has, sooner or later, become insipid and tiresome. Milk, butter, cheese, eggs, meat, fish, green vegetables, and gluten bread, bran-cakes, or almond biscuits form alone a vapid diet, for existence without sweet things is almost impossible, and until very recently there was no substitute whatever for the carbohydrates. Happily, during experiments carried on in the laboratory of the John Hopkin's University, it was discovered that coal-tar yielded a product of 300 times the sweetening power of cane sugar, and that was in no way allied to sugars or starch. Prof. Fahlberg called this product Saccharin, and practical trials made with it on the Continent appear to demonstrate beyond all question that it is one of the most important agents introduced into medicine for many years.

Saccharin is excreted from the body in precisely the same condition as it is taken, and is, therefore, in no sense a food. Considerably over a drachm of it has been administered daily, and it has been given to diabetic patients for months consecutively without the slightest harmful results. Experiments made with it upon various of the lower animals also prove that it possesses no deleterious action. It is highly antiseptic, and on this account has been found useful in fermentative dyspepsia and in genito-urinary troubles, as where the urine decomposes in the bladder. It has been employed with great advantage in conserving fruits, as a very little Saccharin can be substituted for a goodly amount of sugar. Foods may be so prepared with Saccharin that they will be as toothsome as when made with sugar, and diabetic patients submit with happy resignation to a dietary so prepared, when they could not tolerate the non-saccharine regime formerly recommended.

Medical men may do well to note that Saccharin is being supplied for diabetic patients with the very thing of all things which it is desired to shun, *i.e.*, sugar. To introduce Saccharin as a substitute for sugar, and then mix it with sugar, is too utterly absurd to need comment. Insolubility, colouring matters, &c., are the characteristics of some preparations offered to the Profession in the market.

Our own Preparation is free from all these objections, and is the original pure product, as discovered and prepared by Fahlberg. We supply it in powder and Soluble *Tabloids* (½-gr. each). One or two tiny *Tabloids* added to a cup of tea, coffee, or cocoa—in lieu of as many lumps of sugar—will impart to it a sweet and delicate flavour, and leave a pleasant remembrance on the palate.

*Soluble Saccharin Tabloids* supplied to the Profession in bottles at 4d., 8d., and 2s. each. Retail, 6d., 1s., and 2s. 6d.

## PURE LANOLINE (LIEBREICH).

Lanoline has now completely revolutionised the treatment of diseases of the skin, and is extensively prescribed by all dermatologists. On account of its free miscibility with liquids, it stands alone for compounding ointments containing fluids like Liquor Potassæ, &c. As it does not turn rancid, it is infinitely superior to lard, &c., as it never irritates the skin. The readiness with which it penetrates the horny layer, and is absorbed by the skin, gives it precedence over all mineral oils, as well as does the fact that it is a fat natural to the hair and skin. It is easily and perfectly miscible with all kinds of medicines, and constitutes a perfect unguent basis. Not only so, but it renders the skin supple and elastic, and removes the hardness and dryness so troublesome to many people; on this account the Lanoline Cold Cream is a very eligible toilet preparation. Of a most desirable consistence, Lanoline does not melt below body heat, and does not "run" like ordinary ointment.

It is slightly tenacious and adhesive, and perfectly bland and soothing. Recently Lanoline has been much improved, so that it is now much lighter in colour than formerly, and free from odour. We supply also an anhydrous Lanoline. The estimate placed upon Lanoline at first has been intensified and heightened by the results obtained with it during the last two years.

Supplied to the Profession in 1-lb. tins at 3s. 6d. each.

## HAZELINE.

This Preparation has been tested by the most distinguished therapeutists of the day, and given precedence over all other preparations of Hamamelis Virginia. It presents the advantage over them of containing the volatile active principles of Witch Hazel, for it is a distillate of the fresh twigs. Hamamelis or Witch Hazel contains comparatively little of value which is not volatile. Not only is a distillate more potent than any other preparation of the drug, but its properties are distinctly peculiar to itself, and of a value directly in proportion to its volatility.

Speaking of Hamamelis, Ringer says: "It not only checks bleeding, but if this treatment is persisted in for several months, its action on piles that are not very large is permanent."

Hazeline is supplied to the Profession in 4-oz. and 16-oz. bottles at 1s. 2d. and 3s. 6d. each. Retail, 1s. 6d. and 4s. 6d.

*May be obtained from all Dispensing and Wholesale Chemists throughout the World.*

[16]

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.



THE  
YEAR-BOOK OF  
TREATMENT

FOR

1888.

*A CRITICAL REVIEW FOR PRACTITIONERS OF  
MEDICINE AND SURGERY.*

---

Contributors.

J. MITCHELL BRUCE, M.D.  
ALFRED COOPER, F.R.C.S.  
SIDNEY COUPLAND, M.D.  
SIR DYCE DUCKWORTH, M.D.  
GEORGE P. FIELD, M.R.C.S.  
JAMES FREDERICK GOODHART, M.D.  
REGINALD HARRISON, F.R.C.S.  
D. BERRY HART, M.D.  
GEORGE ERNEST HERMAN, M.B.  
ROBERT MAGUIRE, M.D.

PETER MCBRIDE, M.D.  
MALCOLM MORRIS, F.R.C.S.E.  
EDMUND OWEN, F.R.C.S.  
SIDNEY P. PHILLIPS, M.D.  
R. DOUGLAS POWELL, M.D.  
HENRY POWER, M.B., F.R.C.S.  
CHARLES HENRY RALFE, M.D.  
JAMES ROSS, M.D.  
WALTER G. SMITH, M.D.  
FREDERICK TREVES, F.R.C.S.

W. J. WALSHAM, F.R.C.S.

---

CASELL & COMPANY, LIMITED:

*LONDON, PARIS, NEW YORK & MELBOURNE.*

---

[ALL RIGHTS RESERVED.]



WELLS		NOTE
WELL NO.	WELL	NOTE



## PREFACE.

---

THE object of this book is to present to the Practitioner not only a complete account of all the more important advances made in the Treatment of Disease, but to furnish also a Review of the same by competent authorities.

Each department of practice has been fully and concisely treated, and care has been taken to include such recent pathological and clinical work as bears directly upon Treatment.

The medical literature of all countries has been placed under contribution, and the work deals with all the more important matters relating to Treatment that have been published during the year ending September 30th, 1887.

A full reference has been given to every article noticed.





# CONTENTS.

---

	PAGE
DISEASES OF THE HEART AND CIRCULATION. BY J. MITCHELL BRUCE, M.D., F.R.C.P. . . . .	1
DISEASES OF THE LUNGS AND ORGANS OF RESPIRATION. BY R. DOUGLAS POWELL, M.D., F.R.C.P. . . . .	19
DISEASES OF THE NERVOUS SYSTEM. BY JAMES ROSS, M.D., LL.D., F.R.C.P. . . . .	46
DISEASES OF THE STOMACH, INTESTINES, LIVER, ETC. BY SIR DYCE DUCKWORTH, M.D., F.R.C.P., AND ROBERT MAGUIRE, M.D., M.R.C.P. . . . .	56
DISEASES OF THE KIDNEY, DIABETES, ETC. BY CHARLES H. RALFE, M.A., M.D. CANTAB., F.R.C.P. . . . .	78
RHEUMATISM AND GOUT. BY ROBERT MAGUIRE, M.D., M.R.C.P. . . . .	95
ANÆMIA AND ALLIED CONDITIONS. BY SIDNEY COUPLAND, M.D., F.R.C.P. . . . .	106
MEDICAL DISEASES OF CHILDREN. BY JAMES F. GOODHART, M.D., F.R.C.P. . . . .	113
CONTINUED FEVERS. BY SIDNEY PHILLIPS, M.D., M.R.C.P. . . . .	126
GENERAL SURGERY. BY FREDERICK TREVES, F.R.C.S. . . . .	137
ORTHOPÆDIC SURGERY. BY W. J. WALSHAM, F.R.C.S. . . . .	171
SURGICAL DISEASES OF CHILDREN. BY EDMUND OWEN, F.R.C.S. . . . .	187
DISEASES OF THE GENITO-URINARY SYSTEM. BY REGINALD HARRISON, F.R.C.S. . . . .	198

	PAGE
VENEREAL DISEASES. BY ALFRED COOPER, F.R.C.S. . . . .	208
THE DISEASES OF WOMEN. BY D. BERRY HART, M.D., F.R.C.P.E. . .	220
MIDWIFERY. BY GEORGE ERNEST HERMAN, M.B., F.R.C.P. . . .	241
DISEASES OF THE SKIN. BY MALCOLM MORRIS, F.R.C.S.E. . . .	262
DISEASES OF THE EYE. BY HENRY POWER, M.B., F.R.C.S. . . .	279
DISEASES OF THE EAR. BY GEORGE P. FIELD, M.R.C.S. . . . .	290
DISEASES OF THE THROAT AND NOSE. BY P. McBRIDE, M.D., F.R.C.P.E., F.R.S.E. . . . .	302
SUMMARY OF THE THERAPEUTICS OF THE YEAR 1886-7. BY WALTER G. SMITH, M.D. . . . .	313
INDEX TO AUTHORS QUOTED . . . . .	325
INDEX TO SUBJECTS . . . . .	328



THE  
YEAR-BOOK OF TREATMENT  
FOR 1888.

---

DISEASES OF THE HEART AND  
CIRCULATION.

BY J. MITCHELL BRUCE, M.D., F.R.C.P.,

*Physician to Charing Cross Hospital, and Assistant-Physician to the Hospital for  
Consumption, Brompton.*

---

**1. Introduction.**

A chronicle of the events that concern the treatment of diseases of the heart during the passing year would not only be imperfect, but would fail to convey to the reader a correct impression of the position to which we have attained in this department of medicine, if it did not open with a reference to the paper by **Sir Andrew Clark** (*Brit. Med. Jour.*, Feb. 5, 1887) on valvular disease of the heart known to have existed for over five years without causing serious symptoms. This paper may be regarded by the medical historian as closing an important period in the development of the knowledge of cardiac disease, the period, namely, in which the existence, nature, origin, and significance of *compensation* have been worked out by a process of sure induction. The results of the labours of the last thirty years may be said to be summarised by the writer in one sentence: "It will conclusively appear that there exist multitudes of persons with chronic valvular disease of the heart who not only suffer no inconvenience therefrom, but are also capable of discharging the duties and enjoying the pleasures of life." The bearing of this conclusion on the question of the treatment of heart disease does not require to be more directly indicated.

**2. Acute dilatation of the heart produced by alcoholism.**

Dr. Robert Maguire (*Trans. of the Clin. Soc.*, xx. p. 235 ;

*Lancet*, i. p. 1135, 1887) draws attention to the occurrence of acute cardiac dilatation as a result of alcoholism, and describes the progress of two cases of the kind under treatment. In both instances the patients were men, alcoholic, without other discoverable cause for the rapid appearance of the symptoms and signs of dilatation of the heart. In both instances the symptoms entirely disappeared, and the heart returned to ordinary dimensions under observation. Cardiac tonics were prescribed in the shape of iron, nux vomica, and digitalis, for the first case; iron, nux vomica, and nitro-muriatic acid for the second case. Total abstinence from alcohol was enjoined. Both patients recovered very rapidly.

### **3. Primary cardiac dilatation.**

Dr. Graham Steel, of Manchester (*Med. Chronicle*, March, 1887), publishes a valuable contribution on primary dilatation of the heart. Whilst arising from weakness of the ventricular wall, this form of cardiac enlargement is believed by the writer to be preceded by mitral regurgitation. Probably life might be prolonged for many years if the patient could be placed in thoroughly favourable circumstances. It is in the early stages that much can be done for the subject of primary dilatation of the heart. Rest in the recumbent posture is imperatively required. Without it all other treatment will probably fail, and it alone will remove the symptoms in many cases. When there is dropsy, digitalis is the great remedy. Better results have been obtained from the infusion than from the tincture, but probably this is merely an accident. Bronchitis is generally present, and a useful prescription is:  $\mathcal{R}$  Tincturæ scillæ min. 10—15, infusi digitalis  $\mathfrak{zss}$ ., infusi senegæ  $\mathfrak{zjss}$ .; misce; ter die. Dieting is of great importance; the stomach must never be over-burdened, whilst abundant nourishment is supplied to the tissues. When the dropsy and dyspnoea have passed off, iron and strychnine should be substituted for digitalis, and the patient may be allowed to rise, avoiding, however, all but the mildest exercise. The bowels should be kept regular, but purging, with the view of reducing the dropsy, is injurious. Convalescence often takes place with great rapidity, and it is difficult to persuade the patient that immediate return to work will almost certainly result in a speedy breakdown. (For a second case of cardiac dilatation similarly treated by Dr. Steel, see *Lancet*, ii. p. 511, 1887.)

### **4. Cardiac dilatation at puberty in girls.**

Dr. G. N. Pitt (*Brit. Med. Journ.*, Nov. 27, 1886) points out that the great demands made at puberty on the heart may lead to slight cardiac dilatation, and to the lack of reserve cardiac energy to meet emergencies so common at this age, especially in those



who have grown very rapidly. The symptoms of cardiac weakness are usually not met with in those in whom puberty is retarded or is still incomplete. He records a case in point, and describes the treatment employed to remove the dilatation. This treatment consisted in regular exercise, short of fatigue; but the main point was that the patient should lie down for two hours in the middle of the day, so as to give the heart an opportunity of recouping by diminishing its work. Arsenic and iron were given internally. As a result there were no more attacks of dyspnoea, and by the end of six months the other symptoms had disappeared.

### **5. Heart-strain and weak heart.**

Dr. Beverley Robinson, of New York (*Med. Record*, Feb. 26, 1887), points out that the first thing to be done for heart-strain and heart-weakness is to discover the primary essential cause of these affections, and, if possible, to remove it. Excessive physical labour must be treated with rest, and may by itself be sufficient. In the beginning, light diet, frequently repeated, is most useful; later on, the most nutritious foods. He has had the best results from the tincture of the chloride of iron, in moderate and frequently repeated doses, continued for weeks and months, while the liver was gently stimulated by tablet triturations of calomel,  $\frac{1}{4}$  to  $\frac{1}{2}$  gr. morning and evening, or oftener. The usual heart tonics have sometimes proved inefficient; at other times they have been evidently useful. Dr. Robinson does not approve of the use of digitalis in these cases, except in very moderate doses, combined or not with the iron tincture.

If too much digitalis be given, instead of helping the patient, it does him harm. On several occasions when digitalis proved useless or injurious, very excellent results were obtained by caffeine or convallaria; the latter especially when the nervous supply of the heart is implicated. Among cardiac tonics and stimulants for obtaining temporary good effects, at least, there is no drug equal to coca. Given in the form of wine or fluid extract, it does much at times to restore the heart muscle to its former tone.

### **6. The value of Turkish baths in diseases of the circulation.**

Frey (*Deut. Arch. f. klin. Med.*, April, 1887; and *Practitioner*, vol. xxxix. p. 59) in a recent paper records his experience as to the value of Turkish baths in patients suffering from disturbance of the circulation. In cases of aortic and mitral disease dependent upon rheumatic affection and not the result of atheroma, Turkish baths are well borne. This effect is most marked in cases in which compensation is disturbed, with anasarca, failure in secretion

of urine, and dilated right heart. So far from the pulse gaining in frequency under the influence of the bath, after the first ten to fifteen minutes it generally falls, remains between 90 and 100 as soon as perspiration commences; it becomes softer, less tense, more dicrotic; visible arteries, *e.g.* the temporal, are seen to distend, and respiration becomes freer, deeper, and sometimes even more slow. In the after treatment the cold douche is in the first instance to be avoided, a douche at the temperature of the body being used instead. The bath can be repeated daily, or on alternate days, according to the strength of the patient. As improvement goes on, recourse is gradually had to colder douches, then finally the coldest of all may be freely used. The tone of the heart and vessels is in this way greatly improved.

In cases of obesity the cold douche ought not to be used, as the sudden shock produced, acting on a heart overloaded with fat, or the fibres of which may already have become fatty, may readily prove dangerous. In all cases it is important to have regard to this rule, that the sweating stage ought never to be continued after the pulse rises above 100. The diastole of the heart then becomes too short to allow sufficient time for the heart to nourish itself; and under such circumstances the effect of the bath is to weaken rather than to strengthen the cardiac action.

### **7. Exercise in heart disease.**

At the sixth German Congress for Internal Medicine, held at Wiesbaden in April, **Professor Liebenstein** (*Medical Record*, New York, May 14, 1887) read a paper on muscular exercise or rest for heart disease. He said that most practitioners still hold out firmly against a more active treatment of chronic heart disease through exercise of the cardiac muscle; and insisted that, above all things, all acute cases, as well as those where over-distension of the heart has occurred, must be handled with care. Quiet does not, however, improve the chances of the patient; whilst reasonable nourishment, combined with well-conducted exercise, strengthens the myocardium. In all chronic cases we should advance from rest and care to the endeavour to strengthen the heart muscle by exercise. On the ground of large experience, Dr. Liebenstein is confident that active but careful movements, with quiet respiration, conduce to strengthening and slowing the action of the heart. At the same time he warned his hearers against over-exertion, and said that each performance should be followed by a sufficient period of repose.

In the subsequent discussion, **Dr. Schott**, of Nauheim, whilst approving of active but careful movements, with regular breathing, as a method of cure in chronic heart disease, could not



sanction the mountain-climbing method of Oertel. It is useful only for a very small number of patients; and we cannot say when we may commence with this treatment, nor how high or far the patient shall be allowed to climb. There is always decided danger in the plan, and he had seen harm done by it. It is far better to first strengthen the heart muscle by means of baths and gymnastics, so that it can stand the greater labour required for mountain climbing.

**Professor Leyden**, of Berlin, remarked that the mode of treatment originated by Oertel had yielded valuable therapeutic experience and was also an advance. He advised great care in deciding which cases of heart disease could be improved by gymnastic exercises, and when they are to be used. In slight cases in the young, in which valvular insufficiency can be compensated, careful gymnastics may be used.

The English version of the volume of Von Ziemssen's great "Handbook of Treatment," in which **Professor Oertel** deals with the therapeutics of circulatory derangements, has been published during the year. An exhaustive analysis of Professor Oertel's system of treatment by exercise appeared in the "Year-Book" for 1884, page 11.

### **8. The therapeutics of heart disease.**

**Dr. Thomas Oliver**, of Newcastle-on-Tyne (*Lancet*, p. 201, ii. 1887), gives us his estimate of the actual and relative value of most of the remedies in ordinary use for cardiac disease. The cases in which *digitalis* acts satisfactorily are those of mitral regurgitation, where the lesion has not existed too long, with slight dilatation of the left ventricle. Contrary to the opinion of many, Dr. Oliver regards *digitalis* as of the greatest service in the treatment of aortic regurgitation. There are cases and cases of aortic regurgitation, but he does not believe that *digitalis* is dangerous in this form of disease, nor that by lengthening the period of diastole greater reflex is allowed into the left ventricle. His experience is that here, as in other forms of cardiac disease, the patient is likely to do well the nearer we can bring the beats of the heart to the normal. He knows of cases where this form of disease has lasted from seven to ten years, with the pulse as low as forty-four per minute, without there ever having been the least feeling of syncope, the patients working the while.

Admitting that the number of beats of the heart has been reduced by *digitalis*, such slowing is accompanied by improvement in the contraction of the cardiac muscle and by increased arterial tension, which means that the capillaries are better supplied with

blood, and consequently that the heart is better nourished. He cannot recall one case in which digitalis could be regarded as precipitating death in aortic regurgitation, but very many that have experienced the greatest benefit from it. The ill effects which he has seen follow the employment of digitalis have been more upon the stomach than the heart.

On the other hand, he would not use it in cases of fatty heart or extreme dilatation of the left ventricle, nor in any case of cardiac disease, no matter what the lesion, in which arterial tension was already high.

*Convallaria.* Dr. Oliver obtained best results from this drug in aortic regurgitation, and next to that in mitral stenosis. In aortic combined with mitral regurgitation it very quickly relieves urgent dyspnoea, over which digitalis had no effect. Probably it acts purely as a cardiac tonic, *i.e.* by improving the tone of its muscular fibre. It is not, as a rule, badly borne, but in one case of advanced mitral regurgitation sickness always followed its use.

*Belladonna* Dr. Oliver looks upon as a valuable drug in heart disease. It diminishes the sensibility of the endocardium, thus lessening the sense of fluttering and palpitation, and it induces easier and more forcible beats of the heart. Its efficacy is most marked in mitral regurgitation, especially when digitalis or other drugs cause violent sickness, relieving, as it also does, the gastric irritability.

From *caffeine* he has had good results, particularly in mitral stenosis. He frequently combines it with convallaria, and has soon found arterial tension raised and diuresis increased. In only two cases of mitral stenosis was he obliged to discontinue it on account of sickness.

Next to digitalis, or even superior to it, he ranks *strophanthus* as a cardiac tonic. This drug gives great relief in aortic or mitral regurgitation and functional cardiac irregularity. Patients testify to the relief which it gives of cardiac pain, numbness in the left arm, and of dyspnoea; and to its creating a feeling of general well-being. In not a few patients most unpleasant symptoms have been developed, such as sickness, pain in the stomach, and diarrhoea, demanding either the partial or the complete withdrawal of the *strophanthus*. Its taste is also somewhat objectionable, being extremely bitter.

Of *sulphate of sparteine* (dose, one to three grains) as a cardiac tonic, Dr. Oliver speaks highly. It probably acts very much in the same way as digitalis, *i.e.* by contracting the peripheral arterioles. In any case of dropsy where the pulse is small and compressible, he regards sparteine as very promising.



In the insomnia of heart disease Dr. Oliver has found paraldehyde and urethane reliable and safe remedies.

### 9. Digitalis in aortic disease.

Dr. Sansom (*Lancet*, August 13, 1887), in the Therapeutical Section of the British Medical Association at the Dublin meeting, gave a valuable address upon the treatment of some forms of aortic disease. In cases of aortic disease without cardiac symptoms it might be laid down as an absolute rule that all agents which tended to increase the force of the ventricular systole are absolutely hurtful. Compensation being already perfect, such agents could only serve to disturb the equilibrium. As regards the very important question of the administration of digitalis in aortic disease, medical opinion and experience had varied much from time to time. The present tendency was rather in favour of its administration. While carefully guarding himself against an absolute expression of opinion, Dr. Sansom pointed out certain drawbacks to the use of digitalis. These are : (1) It may increase the distress and aggravate the symptoms present. In some of his cases where digitalis had had this effect he had seen great relief follow the administration of five-minim doses of tincture of aconite and the inhalation of nitrite of amyl. (2) Digitalis sometimes caused sickness. (3) In some cases where much temporary relief was obtained by administration, sudden death had followed apparently as the result of its use. Yet, in spite of these dangers and drawbacks, he believed that digitalis was sometimes of service in the *early* stage of aortic disease and for a *limited* time. If given in the same manner and for the same length of time as was usual in mitral disease, great evil would result.

### 10. Digitalis as a diuretic.

An observation of much interest has been made by Professor Kobert, of Dorpat, which goes far to account for the remarkable effect of digitalis as a diuretic. It will be remembered that in the second stage of its action (*i.e.* after contraction of the blood-vessels generally and rise of the blood-pressure), the *renal* vessels dilate, and thus allow great pressure to be thrown upon the circulation in the kidneys. Professor Kobert's observation was made in the course of a series of experiments on the influence of certain circulatory drugs upon the peripheral blood-vessels (*Therapeutic Gazette*, June, 1887, p. 370). Of the substitutes for digitalis in practical use he examined helleborine, scillain, convallamarin, erythrophleine, oleandrine, apocynine, adonidine, and strophanthin, and found them possessed of power to contract blood-vessels. All of these drugs have the effect of the digitalin of Schmiedeberg : they narrow the blood-vessels of all organs which

were examined in the course of the investigations, including those of the kidneys. In marked contrast to all the substances previously described are two others, digitoxin and digitalein, which exercise a *dilating*, not a contracting, influence upon the vessels of the kidneys; whilst, like digitalin, helleborine, adonidine, convallamarin, etc., *in all other organs of the body* they contract the blood-vessels. Now, in cases where a prolonged and energetic secretion by the kidneys is necessary in a patient suffering from dropsy, the result of impeded circulation, the contraction of all the blood-vessels of the periphery is of the greatest practical importance, so that the peripheral blood channels may be narrowed and the rapidity of the circulation be enhanced through the increased functional capability of the heart. It is evident, however, that when in the kidney itself the blood-vessels are not only not contracted but slightly dilated, the secretion of urine will be still more abundant. By the use of digitalis, in which, in addition to a substance which contracts all the vessels (digitalin), there are two others in considerable quantities which dilate the renal vessels (digitoxin and digitalein), we shall produce a continuous diuresis. For these reasons digitalis is an agent which can be supplanted by none of the many other vaso-motor remedies, for we are as yet ignorant of other remedies which act like digitoxin and digitalein. Which preparation of digitalis shall be employed? The infusion is most commonly preferred. But this contains only the substances soluble in water. The three constituents—digitalein, digitoxin, and digitalin—are soluble in alcohol. In alcoholic preparations, therefore, as well as in the leaves themselves, we obtain the three important active principles, and these ought to be prescribed.

### **11. Strophanthus and its active principle.**

Professor Fraser, of Edinburgh (*Brit. Med. Journ.*, July 23, 1887), to whom we are indebted for our original knowledge of this drug, tells us that the active principle, to which he has given the name "strophanthin," does not consist of crystals as was at first believed, but is an imperfectly crystallised body, neutral or very faintly acid, intensely bitter, freely soluble in water, less so in rectified spirit, and practically insoluble in ether and chloroform. We ought to remember that all the mineral acids, excepting carbonic acid and many of the organic acids, resolve strophanthin, even in the cold, into glucose and a substance which he has named "strophanthidin." This action of acids renders it important that an acid, and especially a mineral acid, should not be used in the preparation of strophanthin.



## 12. Tincture of strophanthus.

For a long time a difficulty was experienced (*Lancet*, vol. i. p. 644, 1887) in obtaining a thoroughly trustworthy preparation of strophanthus. Messrs. Burroughs, Wellcome, & Co., have now made a 1 in 20 alcoholic solution which appears to answer every purpose. This new tincture has been carefully examined and tested by **Professor Fraser**, of Edinburgh, who finds it answers his requirements. The dose is from 2 to 10 minims; and no hesitation need be felt in pushing it in suitable cases. The seeds alone are used to produce it.

## 13. Strophanthus as a heart tonic and diuretic.

**Dr. W. Budd**, of Exeter (*Lancet*, Sept. 10, 1887) reports two cases, one of mitral incompetence complicated with anuria and emphysema and œdema of the lungs, the other of mitral incompetence with marked albuminuria, ascites, and anasarca, in which he administered five minims of tincture of strophanthus three times daily with complete success. In both instances digitalis, squill, and hydragogue purgatives had completely failed before the new diuretic was administered. Strophanthus is a heart tonic and diuretic, likely to prove far more valuable in suitable cases than digitalis, caffeine, etc. In **Dr. Budd's** experience its great advantages over digitalis are that no cumulative effect has been observed, when it has been given for several weeks continuously; and that there is no gastro-intestinal disturbance.

## 14. Strophanthus in heart disease.

**Dr. J. Hutchison**, of Glasgow (*Brit. Med. Journ.*, May 7, 1887) gives his experience of strophanthus. The preparation employed was the tincture of the strength of 1 in 8. Besides two cases of valve disease, **Dr. Hutchison** administered the drug in nine other cases, in which he could find no trace of a murmur. In seven of these cases the palpitation seemed to depend on dyspepsia, and remedies were given for that condition; strophanthus was also used in the hope of its exerting a calming and steadying influence upon the heart. In all of them it succeeded in doing so. The remaining two were cases of disordered innervation. The pulse was very rapid and irregular, the heart's action turbulent, so that at times the sounds could not be differentiated. Both patients were much benefited, and though the symptom of which they most complained, palpitation, was not banished, it could be kept within bounds by a timely dose of strophanthus. All the patients expressed the opinion that the drug had a stimulating effect, which, however, soon wore off. Some of them professed to feel beneficial effects ten minutes after taking their appointed dose. The effect of the medicine was rapid, but did not remain

long, and at the end of three or four hours the dose required to be renewed. The system quickly became used to the drug, and to get the amount of benefit the dose required to be gradually increased.

Mr. F. Broadbent, of Collingham (*Brit. Med. Journ.*, Oct. 15, 1887), writes to say that his results with strophanthus at first were unfortunate, for it relieved neither the breathing nor anasarca. On the recommendation of Mr. H. E. Bateman, of York, he then combined five-minim doses of strophanthus with half-drachm doses of ether in a case of extreme dilatation of the heart with anasarca, and found it gave great relief to the breathing, though he has since had to treat the anasarca by drainage. In a very bad case of double pneumonia, with heart failure, he combined strophanthus with an expectorant, and the case got rapidly worse, the respirations going up to 65, the pulse to 130, and the patient becoming very cyanotic. As a last resource he gave strophanthus and ether only, with the result that the symptoms began to abate immediately.

Mr. J. Holroyd, of Chatham (*Brit. Med. Journ.*, Oct. 15, 1887), publishes a note on the effect of strophanthus in two cases of valvular disease.

A woman of thirty-six, the subject of double mitral disease, suffered from periodical attacks of cough, dyspnoea, irregular feeble pulse, sickness as a prominent symptom, and slight oedema of the legs. On several previous occasions a mixture of iron and digitalis speedily gave relief. During a recent attack the tincture of strophanthus, in five-minim doses, was tried, but beyond increasing the force of the cardiac impulse and the quantity of the urine voided, it had no effect on her symptoms, except to make the sickness worse. A return to the usual iron mixture soon gave her relief.

In a boy of seven, with aortic and mitral regurgitation, attacks of angina pectoris, cough, dyspnoea, general anasarca, and scanty urine, strophanthus in three-minim doses thrice daily produced a marvellous effect. The secretion of urine soon became abundant, the cardiac impulse less violent, the original attacks ceased, and in three weeks the dropsy had disappeared. The drug was then discontinued; and three months afterwards the child was better than at any period during the last three years.

### **15. Cocaine as a cardiac stimulant.**

Professor Da Costa (*Philadelphia Med. Times*, p. 302, Feb. 5, 1887) calls our attention to cocaine as a heart tonic in sustaining the circulation in low forms of fever, especially where there is cerebral disturbance superadded. He narrates two recent instances



of the value of the remedy in typhoid fever. The first case was in a man who was extremely ill, the temperature repeatedly rising to  $104^{\circ}$ , with great weakness of pulse, sweating, very feeble action of the heart, and tendency to pulmonary congestion. The usual treatment was ordered: mineral acids, quinine, and turpentine stupes; and a few times oil of turpentine was given internally. From the outset ordinary stimulants seemed to have very little effect: he used twelve ounces of whisky daily without apparent benefit. He was then placed upon cocaine hydrochlorate,  $\frac{1}{4}$  gr. every two hours, and subsequently  $\frac{1}{2}$  gr. at the same interval; and the whisky was reduced to eight ounces a day. The improvement was striking: cocaine showed its power here, as it had in other cases. The patient began to improve in the course of twelve hours after it was begun, and the cocaine was gradually reduced, whilst he was increasing in strength and in volume of pulse. In another case of typhoid fever in a man the temperature was  $105^{\circ}$ . There was the same extreme prostration and failure of stimulants to act upon the heart; the pulse was 130, and very weak; the apex beat lacked force; the first sound was almost inaudible. This patient had also used quinine and mineral acid, and for a short period tincture of digitalis, but with perfectly negative results. Whisky was likewise without effect. Cocaine was then given,  $\frac{1}{4}$  gr. every two hours, increased to half a grain. The man's life hung in the balance for a few days; but then—really, Dr. Da Costa thinks, as the result of the cocaine—he grew more quiet, the nervous symptoms were favourably influenced, and the heart and pulse became decidedly stronger. He began on the 5th; the dose was increased to half a grain on the 6th; it was kept on at that rate until the 14th, when he had so manifestly improved that it was decreased to half a grain every four hours; and about a week afterwards it was gradually withdrawn altogether.

### 16. Caffeine.

Professor Leech, of Manchester (*Med. Chron.*, v. p. 302, Jan., 1887), publishes a critical abstract of three papers on caffeine, viz.: Bronner, "Diuretische Wirkung des Koffeins," Strassburg, 1886; Schroeder, "Ueber die Wirkung des Coffeins als Diureticum," *Arch. f. exp. Path. u. Pharm.*, vol. xxii. pp. 1, 2, Oct., 1886; and Langgaard, "Zur diuretischen Wirkung des Coffeins," *Centblt. f. d. med. Wiss.*, July 17, 1886. All three writers deny that caffeine has any digitalis-like influence on the heart. The diuretic influence of caffeine is said to be sometimes enormous, sometimes small, never absent. It is apt, Bronner thinks, to lose its effect if continuously administered, but after two days' cessation

it acts as powerfully as before. He therefore advises its occasional discontinuance for two days if a prolonged employment of the drug is deemed desirable. He found it useful in dropsies from many causes, and does not think its diuretic influence most marked in valvular disease of the heart. He asserts that caffeine has no influence on the heart's action in heart disease, and that the pulse frequency is not diminished even where it produces marked diuresis. The dose used was from 7 to 22 grains daily in divided doses, and it was given every two hours in the morning only, so that it might not cause sleeplessness.

**Schroeder** has arrived at the conclusion that caffeine exerts two opposite influences: (1) It stimulates the nervous system, like strychnine, and through the vaso-motor centres causes contraction of the renal vessels, thus tending to decrease the urine flow. (2) It stimulates the kidney itself, and tends to greatly increase the urine flow. The contraction of the vessels may compensate partly or completely the stimulation of the secreting tissue of the kidney; hence the real and powerful diuretic influence of caffeine has remained so long hidden. Schroeder thinks that the effect of caffeine on the kidney is, to a certain extent, comparable to that of pilocarpine on the salivary glands and sweat secretion; but it acts directly on the renal epithelium, not through the nervous apparatus. He denies the direct influence of caffeine on the heart, and thinks any rise of blood pressure following its use is due to its stimulant effect on the vaso-motor centre.

**Langgaard** has arrived at results quite similar to those of Schroeder. At present, says Dr. Leech, the balance of evidence is certainly against the view heretofore held by many, that caffeine influences the heart like digitalis, and points to the probability that the diuretic effect of the drug is due to its influence on the secreting tissue of the kidney.

### 17. Sulphate of sparteine.

In the "Year-Book of Treatment" for 1886, p. 5, the views of Sée and Laborde and Legris as to the value of sparteine in cardiac diseases are set forth. **Voigt** (*Wien. med. Blat.*, Nos. 25 and 27, 1886, abstracted in *Med. Chron.* v. p. 308) recounts the experience of the use of this drug in Professor Nothnagel's clinic, and confirms most of those views. It stimulates and regulates the heart, the pulse becomes stronger, and arterial tension is increased. It may be used in valvular disease where there is disturbed compensation, or to quiet irregular action, even where the compensation is fairly good. It may likewise be given where, apart from valvular disease, the heart muscle is weak. Laborde and Legris advised  $\frac{3}{4}$  to  $3\frac{3}{4}$  grains in twenty-four hours. Voigt recommends doses



of  $\frac{1}{60}$  to  $\frac{1}{30}$  of a grain only. He has known vertigo, headache, palpitation, and nausea follow  $\frac{1}{60}$  to  $\frac{1}{15}$  of a grain, but these symptoms are only transient, and do not prevent the continuance of the drug. Sometimes a slight narcotic action is observed. Sparteine acts quickly. The effect of one dose may last twenty-four hours. It is well to intermit its administration every few days. The influence, though quickly exerted, is not prolonged enough, Voigt thinks, to remove great disturbances of compensation. Repeated doses do not regulate the heart continuously, like digitalis, but it is superior to caffeine, adonis vernalis, and convallamarin. It may be given in combination with digitalis.

### 18. Action and uses of sparteine.

Professor Leech, of Manchester, at the Dublin meeting of the British Medical Association (*Lancet*, August 13, 1887), gave an address upon sparteine, the active principle of common broom. One thing was certain about sparteine—it was a perfectly safe drug: he had himself taken 5-grain doses without any unpleasant effect. It produced no effect upon either the brain or cord; but he was satisfied that it was a fairly powerful diuretic, though not so certain or potent as digitalis. In eight cardiac cases in which he had tried it, the increase in the quantity of urine had averaged 10 or 12 ounces per day, and the stoppage in the use of the drug had been followed by the cessation of this increase. Like digitalis, it was useless in many advanced cases of heart disease, but he had known it to succeed where digitalis had failed. In acute kidney disease sparteine was useless, but it had a diuretic action in some chronic renal maladies. It had few disadvantages. Dyspeptic troubles were the only drawback complained of, and these were not usual.

### 19. Sparteine in comparison with digitalis.

Stalssel (*Centralblatt für die Gesamte Therapie*, April, 1887) has made extensive experiments on this point, in Vienna, and concludes as follows:

“Sparteine, in doses of  $\frac{1}{6}$ ,  $\frac{5}{6}$ , and  $1\frac{1}{2}$  grains, produces the same results as digitalis, in somewhat less degree. It is not a pure diuretic. No ill effects were observed. Digitalis is superior to sparteine in every respect. It is only when digitalis is not well borne, or when the newer drug can be used as an adjuvant to digitalis, that it should be employed.”

### 20. Adonidine in dilated heart.

Dr. Da Costa (*Philadelphia Medical Times*, May 28, 1887) discusses the value of adonidine as a heart tonic in a case of mitral stenosis with feeble irregular pulse after the disappearance

of dropsy under digitalis. One-tenth of a grain of the new alkaloid, adonidine, was ordered three times a day at first; subsequently it was given five or six times in the twenty-four hours. The effect upon the heart was strikingly good. The temperature rose coincidently with the administration of the adonidine: the low temperature, which had continued all the time the man was taking digitalis, ceased when he began to take the new remedy. Secondly, this was attended with an increase in the strength and action of the heart, proving its influence as a cardiac tonic. In one respect adonidine was different in its action from digitalis: it had no diuretic action. The urine came down to a pint in twenty-four hours; and this induced a return to the digitalis (a dessert-spoonful of the infusion four times a day). The urine at once increased, but the improvement in the heart remained stationary. The case permits a comparison between digitalis and adonidine. This agent, whilst its powers as a heart tonic are not inferior to digitalis, is free from the disturbing action of the latter. Dr. Da Costa considers adonidine valuable in heart affections. He has not observed from it anything resembling the cumulative effect which at times, though rarely, follows digitalis. In this case the contractions of the heart, while they became more regular, were reduced to fifty-six per minute. The patient had slight vertigo and headache, which disappeared upon resuming the infusion of digitalis, while the adonidine was continued. This drug will never supersede digitalis in the treatment of cardiac dropsy, from its want of diuretic action, but in other cases this might prove a decided advantage. In patients with very decided hypertrophy the adonidine produced disagreeable results: the heart's action became intensified, and attacks of palpitation came on upon slight exertion. This indicates its line of usefulness. In a given case of weak and disordered circulation, the nearer it approaches a condition of dilated heart, the more benefit from the adonidine; the more it approximates towards hypertrophy and over-action of the heart, the more is this agent contra-indicated. In cases of weak digestion with weak heart it is especially suitable.

## **21. Calomel as a diuretic in heart disease.**

Professor Leech, of Manchester (*Med. Chron.* v. p. 412), publishes an abstract giving the further evidence of the value of calomel as a diuretic which has appeared since the publication of Jendrassik's results ("Year-Book of Treatment" for 1886, p. 66). Stiller (*Wien. med. Woch.*, No. 28, 1886) confirms the statements of these observers, that calomel in some cases promotes a profuse flow of urine. He used it in cardiac dropsy, and saw as much as ten pints of urine passed in one day after the administration of

the drug. If diarrhœa followed its use, he combined it with opium, which did not interfere with its diuretic effect. Mendelsohn (*Deut. med. Woch.*, No. 45, 1886) likewise found that in cardiac dropsy it acts satisfactorily, three grains three times a day producing copious diuresis in forty-eight hours. When the increased urinary flow is well established, he thinks it wise to discontinue the medicine, resorting again to it when the discharge of urine becomes lessened. He finds it most useful when the tension of the pulse is not much reduced. It acts sometimes in cases where digitalis has failed to do good. Terray (*Pest. med.-chir. Presse*, 1886) and Weinstein (*Wein. med. Blätt.*, p. 206, No. 7, 1887), abstracted in *Med. Chron.* vi. p. 147), whilst affirming the diuretic effects of calomel, draw attention to the evils which may follow its administration. Terray states that stomatitis occurred in all his cases, and its intensity seemed directly proportional to the diuresis. Weinstein records a marked increase in the excretion of the urine in four cases of pleural effusion, two cases of cirrhosis of the liver, and one case of Bright's disease. But he found grave evils arise from the administration of calomel as a diuretic; profuse diarrhœa, stomatitis, and salivation sometimes occurring after even small doses. The diuretic influence of the drug, he says, is not of long duration, and he recommends it chiefly in ailments which have run their acute course, leaving œdema behind them, and in those where the mercurial itself is likely to exercise a beneficial effect, *e.g.* in pleural exudations.

## 22. Cyanide of zinc in cardiac cases.

Professor Lashkevitch (*Brit. Med. Journ.*, Aug. 20, 1887) finds that cyanide of zinc, or, as he terms it, "zincum hydrocyanicum sine ferro," has a peculiarly beneficial action on cases of palpitation and pain in the region of the heart, with want of proper rhythm, both when valvular disease is present, and also when the symptoms depend on some neurosis. In the latter case, however, the action is most marked. In cases where digitalis, convallaria, and other drugs commonly prescribed in cardiac affections, appear to irritate the abdominal viscera, cyanide of zinc has shown itself particularly valuable. The dose is one-tenth to one-eighth of a grain, three times a day. A very few doses usually produce a perceptible effect.

## 23. Puncture of the heart in chloroform narcosis.

Dr. B. A. Watson (*Boston Med. and Surg. Journ.*, June 2, 1887) concludes from experiments on dogs that puncture of the heart, especially of the right ventricle, stimulates muscular contractions, and may be advantageously applied in cases of chloroform narcosis. He believes that the best results are obtained when



abstraction of blood from the cavity of the ventricle is combined with the stimulating effect produced by the entrance of the aspirator needle ; and that the puncture of the right ventricle is a safer and more efficient procedure than puncture of the right auricle.

Upon this, **Dr. Wesley Mills**, Professor of Physiology, Montreal, publishes a warning in connection with surgical puncture of the heart (*The Medical News*, July 9, 1887). He reminds us that a needle thrust into the heart of a dog may *arrest* the ordinary ventricular beat, and substitute for it a "fibrillar" action, quite ineffective in expelling any blood from the organ. The heart contains a peculiar vulnerable area near the line of the left coronary artery, at about one-third of the distance from the base of the heart. Whether puncture must be confined to the very circumscribed area referred to above, to cause the fibrillar contraction, Professor Mills is unable from personal observation to say. The phenomenon in the dog lasts from seven to ten minutes, *when the heart is arrested beyond the power of recovery*. There is reason to believe that the heart of man would behave similarly to that of the dog. When needle puncture is seriously proposed *as a remedy*, Professor Mills considers it his duty to sound a warning against such a possibly dangerous procedure. The insertion of a needle into the heart might excite the quiescent organ to action, while again it might cause a feebly beating heart, which would perhaps recover if given a chance, to become hopelessly inco-ordinated.

#### **24. Malarial affection simulating Basedow's disease.**

**Dr. Andrew H. Smith**, of New York (*Med. Record*, New York, Nov. 20, 1886) gives a brief account of a case in which quinine gave complete relief to a lad of eleven years, suffering from sudden enlargement of the thyroid with quotidian rise and fall, corresponding pyrexia of intermittent type, and palpitation, but no proptosis. The quinine was administered "in full doses" during the day. Dr. Smith speculates as to the possible origin of "the ordinary form" of Basedow's disease in chronic malarial poisoning.

#### **25. Thoracic aneurysm.**

**Dr. Suckling**, of Birmingham (*Brit. Med. Jour.*, April 30, 1887), gives a brief summary of twenty cases of thoracic aneurysm that have been under his care at the Workhouse Infirmary and at the Queen's Hospital during the last two years. In twelve cases Tufnell's plan of treatment, together with the administration of iodide of potassium, gave great relief. In two cases the dulness almost disappeared, the pressure symptoms completely so ; and

the diagnosis of aneurysm could not have been made without a knowledge of the previous condition. The iodide was given in large doses, commencing with 10 grains, and increasing to a dose of a drachm or more, according to the tolerance and effects. In two or three cases the iodide seemed to do harm, the pulse becoming very quick. Aconite in these cases suited better. Electrolysis was performed in one case with temporary relief.

## **26. Pathology and treatment of aneurysm.**

Mr. Timothy Holmes (*Brit. Med. Journ.*, Dec. 11, 1886), in opening a discussion on the pathology of aneurysm at the meeting of the British Medical Association at Brighton, referred incidentally to several methods of treatment in relation to the causation of the disease. In his view the true syphilitic degeneration of arteries rarely leads to aneurysm, but rather to the obliteration of the small vessels which are its favourite seats. He will not, however, deny that there may be exceptional cases in which the syphilitic deposit breaks down prematurely and the arterial wall gives way, either totally, causing hæmorrhage, or partially, leading to aneurysm. Without denying the success of iodide of potassium in the hands of others, in his own hands and in the other cases which he has watched it has proved futile. If it cures, it does so not by any specific influence on any assumed syphilitic deposit in the wall of the vessel, but by its influence on the general circulation. Nor has he ever been able to convince himself of the curative virtue of any drug. Complete rest and carefully regulated diet are almost always beneficial, and, in some exceptionally fortunate cases, may produce a cure; and it is more reasonable to ascribe the cure in those cases which have recovered under the use of iodide of potassium, acetate of lead, or other drugs, to the accompanying rest and regimen than to the medicinal treatment. Mr. Holmes insists upon the importance of *the sac* in the pathology and cure of aneurysm. We are too apt to reason about aneurysm as if the sac were a dead india-rubber bag, acted on by hydraulic pressure, instead of a living tissue, whose vital actions must be taken account of in any complete theory of the growth or cure of aneurysm. The rapidity with which aneurysms may sink or almost disappear is inexplicable on mechanical principles, and must be mainly due to the vital actions of the tissues of the sac. So with their sudden local extension. This shows that our treatment, to have most success, must not only be directed to the contents, but must place the sac in the most favourable conditions. Moore's treatment has the defect that it is not directed to the sac. In many cases it even injures the sac, producing inflammation and softening. So with electrolytic treatment.

Still, both the introduction of foreign bodies and electrolysis have been of value in some cases, especially where the growth of *portions* of the sac has threatened to prove fatal, the operation having produced consolidation in that portion of the tumour, and the patient rescued from immediate danger. It is more in these partial proceedings than in attempts at complete cure that the value of electrolysis and the introduction of foreign bodies is shown.

On the same occasion Professor Dreschfeld (*loc. cit.*, p. 1149) mentioned a case under the care of Dr. Simpson, of Manchester, in which electrolysis was tried, without special benefit after four or five applications, in the course of three years. Post-mortem, two aneurysms of the aorta were found; the one which had not been treated was cured spontaneously; the other, which had been treated by electrolysis, showed but a very thin layer of fibrin. He also spoke of the injection of fibrin ferment into the sac, which had been tried in one case, but unsuccessfully.

**27. Some points in relation to the diagnostic significance and therapeutic indications of laryngeal symptoms resulting from pressure of aneurysms upon the vagus and recurrent laryngeal nerves.**

Dr. David Newman, of Glasgow (*Brit. Med. Journ.*, July 2, 1887), in a lecture on this subject, alludes to one point in the treatment with reference to the question of tracheotomy in cases of aortic or innominate aneurysm. Paroxysms of dyspnoea not only act very deleteriously by causing increased strain upon the walls of the sac, but are also an immediate danger to life. Therefore, placing a tube in the trachea will permit of rest, and will relieve the patient of the danger of death from asphyxia or rupture of the aneurysm during a paroxysm.

As a clinical observer and pathologist, experience has taught him that in a large number of cases of aneurysm death from hæmoptysis is preceded by threatenings of laryngeal suffocation; and that in many cases rupture of the sac has been directly caused by spasmodic dyspnoea. It is not only when suffocation threatens that tracheotomy should be performed. The operation should be resorted to whenever it is evident that life may be placed in jeopardy by laryngeal dyspnoea, or when the laryngeal impediment is causing enlargement of the sac by strain upon the circulation.

The tracheotomy tube should have an opening on its convex aspect, with a valve so arranged as to enable the patient to breathe by the mouth and speak by occluding the tube with his finger.



# DISEASES OF THE LUNGS AND ORGANS OF RESPIRATION.

BY R. DOUGLAS POWELL, M.D., F.R.C.P.,

*Physician to the Middlesex Hospital and the Hospital for Consumption, Brompton.*

---

## **1. Asthma, iodide of potassium and chloral in.**

Lazarus (*Deutsch. med. Wochensch.*, No. 50, 1886), reviewing the various means of treating asthma, recommends, for warding off the attacks, 20 grains each of iodide of potassium and chloral, one to three times a day. Emphysema and bronchial catarrh, the result of asthma, are most effectively treated by the pneumatic cabinet.

## **2. Asthma, hydrate of terpine in.**

Lazarus has found hydrate of terpine of service given in pills of  $1\frac{1}{2}$  grain, three to be taken three or four times a day.

## **3. Asthma, faradisation of trigeminal nerves, etc.**

In a discussion on the treatment of asthma in the Berlin Medical Society, certain new methods were mentioned. Schadowald maintained that the disorder was essentially a neurosis of the trigeminal nerves, and should be treated by *faradisation* of those nerves during an attack. The same treatment applied during the intervals would provoke a paroxysm. Lubinski further recommended *inhalations of pyridin*, if only used with caution, for very alarming symptoms may follow its use. *Amyl nitrite* *nitro-glycerin* and *sodium nitrite* act similarly, but are more appropriate in cardiac asthma. The opinion of the majority of those who took part in the discussion was that the cases in which asthma was benefited by cauterisation of the nasal mucous membrane were exceedingly rare.

## **4. Asthma, cocaine in.**

Mosler, of Greifswald (*Birm. Med. Review*, p. 236, Nov., 1886), points out that cocaine has a central as well as a peripheric local action on the sensory nerve endings, and this central action is at first stimulating, but afterwards sedative or narcotic. By both these reactions cocaine ought to be of use in asthma. Beschorner

has published two cases in which it was of service, and Mosler in three cases has obtained excellent results. All the cases were uncomplicated, and occurred in young people of twenty-three to twenty-five years of age. The drug was given subcutaneously. The first patient was relieved after the third injection; two more doses caused abeyance of the attacks for a fortnight. In the second and third cases the treatment was more rapid in cutting short the attacks. In one case faintness and an appearance of dark spots before the eyes were observed, but soon passed away.

Of the remedies above advocated for asthma none are new, nor on present evidence would one feel disposed to displace iodide of potassium, stramonium, lobelia, nitre inhalations with or without stramonium, until in any given case they had proved of no effect. In the subcutaneous use of morphia we have a powerful, although a hazardous, remedy, only to be employed with reluctance and caution (vide "Year-Book," p. 19, 1885). Chloral has long been used, and its combination with iodide of potassium, as recommended by Lazarus in cases where stramonium had failed, is well worthy of further trial in spasmodic asthma. In certain cases of cardiac and aneurysmal dyspnoea of a paroxysmal kind, the combination of 10-gr. doses of iodide of potassium and chloral hydrate has proved very serviceable. Pyridine inhalations must be used with caution, and are best avoided in those cases of long duration in which secondary pulmonary and cardiac changes have developed. Kovacz (*Wien. med. Blatt.*, No. 13, 1886) recommends pyridine in such uncomplicated cases of asthmatic dyspnoea, 5 to 20 minims of the drug in an ounce and a half of water for inhalation. (See also "Year-Book," pp. 20, 21, 1886.)

### **5. Acute bronchitis, treatment of.**

Dr. Muirhead (*Edin. Med. Journ.*, 1887, I., p. 577) in a clinical lecture discusses the various methods of treating acute bronchitis, and while recommending many old and well-known remedies, in an able article gives his experience of their action. He believes that warm moist air provided by the usual bronchitis kettle is much preferable to the use of the small inhaler, if plain steam only is required. If, however, medicated steam is requisite, such for instance as that containing conium vapour, then the small inhaler must be employed. In applying poultices to the chest, for the relief of the rawness, tightness, constriction, and pain beneath the sternum, it must be borne in mind that the poultice must not be too heavy, and it may advantageously be covered with mackintosh. In young children, who greatly object to the use of the "jacket poultice," the same end may be attained by

two folds of lint shaped to fit the body, well wrung out of hot water, and accurately covered with mackintosh, the whole being stitched round the chest; or instead of the lint, dry medicated cotton-wool may be used, the mackintosh again covering all. In pneumonia, Dr. Muirhead has abandoned poultices, on account of the risk of chill attending their renewal, and instead he prefers to redden the skin with a turpentine stupe, then envelop the whole chest in a jacket of medicated cotton-wool stitched inside flannel and fastened in front by tapes. The jacket should be changed morning and evening, since it soon becomes sodden by perspiration. For the tender skin of an infant, a piece of flannel passed through mustard water (one dessert-spoonful of mustard to a breakfast-cupful of tepid water) will be found a sufficient and safe rubefacient.

Amongst therapeutic remedies Dr. Muirhead considers the sedative or nauseating expectorants the most important. As a rule, the drugs should be given in quantities sufficient to produce nausea short of vomiting, but of course occasionally the full emetic effect is desirable. *Antimony* is of the greatest use in the first stage of acute bronchitis, when the mucous membrane is dry, inflamed, and swollen, and the cough frequent. It should be stopped, however, as soon as secretion is fairly established. The wine is the preparation recommended, and in doses of 15 minims every three hours. In an adult the effect is increased by a small dose of morphia (say liq. morph. hydrochlor mv.) added to the antimony, or the liq. opii sed. may be substituted. In some cases of phthisis, a febrile condition resembling that of acute bronchitis is found, and is relieved by similar treatment. *Ipecacuanha* is of similar action. *Lobelia* may be used with caution where there seems to be spasm of the bronchial muscles, and is hence most appropriately employed in bronchial asthma together with iodide of potassium.

*Ammonia* is recommended in every stage of bronchitis: in the early stages as the liq. ammon. acetat., later on as the carbonate or hydrochlorate. The aromatic spirit of ammonia is the best preparation in adynamic forms of bronchitis, but a warning is given that the long-continued use of ammonia impairs digestion by neutralising the gastric juice. As a prescription for the pre-exudation period of bronchitis, the following is recommended:

R	Vini antimon.	...	...	...	...	3iij	
	Liq. potass. ...	...	...	...	...	3ij	
	Liq. ammon. acet.	...	...	...	...	3iij	
	Syrup. aurant.	...	...	...	...	3iss	
	Aquam ad....	..	...	...	...	3vj	M.

S. One tablespoonful in a wineglassful of water every three hours.



If from feebleness or old age the patient is unable to expel the mucus, the emetic remedies are necessary, and we may use either direct or systemic emetics. Amongst the former are *sulphate of zinc*, *mustard* (one or two teaspoonfuls in a tumbler of tepid water), and *alum* (3j in glycerine or golden syrup). The latter is slow in action, and sulphate of copper is not desirable, since it sets up occasionally gastro-enteritis. Amongst the systemic emetics, *ippecacuanha* in doses of 20 grains of the powder or 3ij of the wine is the most commonly employed, but not the most powerful. Tartar emetic is too depressing, but *apomorphia* given subcutaneously in  $\frac{1}{10}$  grain dose is the most prompt. Its action is, however, sometimes uncertain. When secretion is established, stimulating expectorants are best. Squill and serpentry are of course well known. *Senega* is to be objected to on the grounds of its bitter taste and uncertain action. *Quillaya saponaria* has, however, in Dr. Muirhead's hands, fulfilled all the expectations raised by the early experimenters. It contains, according to Kobert, almost the same principles as *senega*, but they are present in more constant quantity, and it is better borne by patients, seldom producing vomiting. It is counter-indicated by inflammation of the stomach or intestines. The tincture, in half to a whole drachm dose, and the decoction, in one tablespoonful dose, may be given; and it will be found to be of use in emphysema, dilatation of the bronchi, chronic bronchial catarrh, and pneumonia. *Alkalies* are of use in gouty cases. *Belladonna* is of value especially where there is spasmodic difficulty of breathing accompanying emphysema, but should not be given in the pre-secretion stage of bronchitis.

Astringent remedies are to be employed when the secretion is excessive; and of these the terebinthinate preparations, such as *turpentine*, *terebene*, and *eucalyptus*, taken in capsules of 5 to 10 min. three or four times daily, are best. Inhalations, too, of *pine oil*, *creosote*, and compound tincture of *benzoin*, are now of value, all of which are best given by adding a teaspoonful to a basin of hot water placed near the bed, the oil being thus vaporised and diffused through the room.

The arrangement of the food is important. The strength of the patient must be kept up by regular administration of nutritious diet, and alcohol should be given when the heart begins to fail.

To the above valuable practical remarks of Dr. Muirhead on the treatment of acute bronchitis may perhaps be added a further caution with regard to the use of poultices in feeble subjects, and especially in infants and old people, viz. not to embarrass the

inspiratory muscles by too much wrapping up in poultices or fomentations; plenty of play must be secured to the chest. When skilfully adjusted, poultices are very valuable, but in many instances it is practically safer and better to apply cotton wool. In old people and children morphia had best be never employed, and even in strong adults its use would be limited to the dry stage.

#### 6. Iron in bronchitis and pneumonia.

Illingworth (*Prov. Med. Jour.*, p. 94, Feb. 1, 1887), as soon as the tongue is moist, recommends 5-minim doses of the tincture of perchloride of iron with glycerine every hour or two. If the complexion is dusky, this dose may be given every hour to an adult, and drop doses to a child. Similarly in pneumonia, where there is abundant secretion with deficient power of expectoration, if the tongue is moist and flabby, iron again works a marked change for the better. The physiological reason for this treatment is, it is suggested, the absence of fibrin or a decrease of fibrin elements in the blood in asphyxia.

#### 7. Terpene in bronchorrhœa and other lung affections.

In the *Therap. Monatsh.* (Jan., 1887) this drug is recommended as an expectorant, especially in broncho-blenorrhœa. It may be given in the following forms:

	R	Terpini hydrat.	...	...	gr. 45
		Sacchari			
		Gummi Arab.	...	...	āā. gr. 15
		Aquæ q. s. ut fiant pil. xxx.			
	S.	One to four pills three times daily.			
Or,	R	Terpini hydrat.	...	...	gr. 36
		Spiritus	...	...	ʒij.
		Aq. destill.	...	...	ʒij.
		Syr. menth. pip.	...	...	ʒij.
	M. S.	One tablespoonful three to six times daily.			

Ferreira (*L'Union Médicale*, Dec. 11, 1886) has given terpene in various lung affections, and finds that in doses of 3 to 9 grains it acts as an expectorant, but in larger doses it diminishes bronchial secretion. He gives it in the form of pill made with balsam of tolu in doses of 3 or 4 grains three times daily, and has obtained good results in tubercular pneumonia, phthisis, bronchiectasis, and in various forms of bronchitis.

#### 8. Oil of sandal-wood in fœtid bronchitis.

Da Costa (*Philadelph. Med. Times*, April 2, 1887) gives an account of a severe case of fœtid bronchitis occurring in a male patient, aged thirty-two, which he treated successfully by oil of

sandal-wood. So severe were the symptoms that abscess of the lung was at one time entertained as a possible diagnosis. The symptoms comprised cough, foetid expectoration, nummular sputa, emaciation, sweating, increased temperature, and pain in the left side, diarrhœa, vomiting, and frontal headache. There was dulness on percussion over the middle of the posterior part of the left lung, and moist râles and pectoriloquy were at times heard. The expectoration occasionally contained blood, and amounted to a pint and a half in the twenty-four hours, but contained no tubercle-bacilli, nor elastic fibres. Carbolic acid, terebene, and other agents, were tried in various forms without avail. Then oil of sandal-wood was given in 5-minim doses three times, and afterwards five times, daily, with most striking results. The expectoration almost ceased after about a month's treatment. The dulness over the lung no longer was found, nothing but a little harshness of breathing remaining. The results fully justified an opinion that the case had been cured by the oil of sandal-wood. The effects of the oil on the genito-urinary mucous membranes had suggested to Dr. Da Costa its use in bronchial affections, and he specially insisted upon its value as a therapeutic agent in such cases. It had, in his hands, afforded great relief.

It must be confessed that the physical signs in this case strongly suggest the probability that it was one of localised sloughing or abscess of lung.

### **9. Pneumonia, general treatment of.**

In the *Medical News* (p. 290, March 12, 1887) an account is given of the methods adopted in the treatment of pneumonia in the various New York hospitals. At the Bellevue Hospital **Professor Loomis** administers full doses of morphia hypodermically, if the patient is seen during the stage of initial shock, and these are repeated with sufficient frequency to relieve pain during the first three or four days, or until the consolidation is complete. Every patient is clothed in a flannel jacket covered with oil-silk, extending from the neck well down the trunk, and the diet is of milk, chicken-broth, and beef-tea. If the consolidation is confined to the lower lobe, the temperature not above 104°, and generally the case progressing without extraordinary symptoms, the bowels are kept freely open, and the treatment is purely expectant. A rise of temperature above 104° F. is treated by quinine in one dose of 20 grains, repeated in divided doses spread over an hour if no reduction of temperature is effected within an hour. If quinine alone fails to reduce the temperature, then it is combined with antipyrin, but at the same time some cardiac stimulant is given. Stimulants are given if the heart's



action fails, and if the patient is suffering from pneumonia of the apex, or is an alcoholic subject. Alcohol and caffeine are used as stimulants if a prolonged effect is required, while digitalis and ammonia are used for emergencies. The cough is considered to rarely require treatment, but if excessive, it may be alleviated in the early stages by opium, in the later stages by carbonate of ammonia, with serpentaria or wild cherry. Pain is controlled early by opium and large hot poultices, later by poultices alone. Renal complications are met by ether, infusion of digitalis, and nitro-glycerine; sleeplessness by bromide and chloral, with cardiac stimulants added for alcoholic subjects.

Edema is treated by dry cupping over the entire chest, atropia hypodermically, whisky, and digitalis internally, and the free inhalation of oxygen.

In the St. Luke's Hospital **Dr. Kinnicutt** has for some five years adopted a wholly expectant treatment. Absolute rest in a strictly horizontal position until some days after defervescence is carefully enjoined. This is intended to avoid all risk of sudden death from heart failure, which occasionally occurs. Opium in the earlier stages is believed to combat in a measure the tendency to heart failure. The pulse, the tongue, and the mental condition are the guides for the administration of alcohol, and during the first days of convalescence diminished doses of alcohol have been found advisable. Antipyretics have been rarely necessary, but on the temperature reaching  $105^{\circ}$  a single dose of antipyrin, 8 to 12 grains, by the rectum is given and repeated if necessary. The diet is of milk, raw or peptonised. The results of this treatment have been excellent.

**Dr. Beverley Robinson** avoids all cardiac sedatives like aconite, and prefers to order a few doses of ammonia, a small amount of opium (preferably Dover's powder), and a linseed poultice. When the physical signs of the pneumonia are well recognised, he prescribes moderate doses of digitalis, and two to four ounces of brandy or whisky in the twenty-four hours. Milk is given every hour, with egg-nog or beef extract morning and evening. Calomel (5 grains), followed by a saline aperient, is used to remedy constipation; but an enema is preferred if the patient is much prostrated. A temperature of over  $103^{\circ}$  F. is believed to call for 5 to 10 grains of quinine by the mouth every four hours. If the heart is feeble during convalescence convallaria is used with the best effect. During convalescence again, fly-blisters, with small doses of belladonna, strychnine, and carbonate of ammonia in infusion of cinchona, hasten absorption. Delirium is allayed by the ice-bag to the head, or by the internal use of ether or bromides.

Venesection, when performed under favourable circumstances, has been found useful to relieve asphyxia, accompanying a dilated and overburdened right heart.

#### **10. Antipyrin and calomel in croupous pneumonia.**

Posadsky (*Deutsche med. Wochenschr*, Nos. 37 and 38, 1886) has tested the effects of antipyrin in acute croupous pneumonia in twenty-five cases, and with no markedly good effects. Complications were frequent; vomiting occurred after the administration of large doses, and a rash appeared sometimes. There was never any delirium, and a continual though slight diaphoresis was maintained throughout the attack. Nevertheless, the antipyretic action was absolutely unreliable: sometimes no fall was observed, and if this did occur the temperature soon rose again. In five cases, after large doses, collapse occurred. The doses given ranged from 8 to 32 grains.

In twenty-three cases small doses of calomel were given, and the results compared with those described above. Delirium was present in more than half the cases of this series, but there was no collapse, and no sweating until the crisis occurred, when it was profuse. The patients lost and regained weight rapidly, and the whole attack lasted only nine days, as compared with thirteen and a half days, which was the average under antipyrin.

#### **11. Quinine in pneumonia.**

A discussion upon the use of quinine in pneumonia, which took place at a meeting of the New York Academy of Medicine, as reported in the *New York Medical Record*, p. 134, January 29, 1887.

Dr. Ripley, who introduced the discussion, dwelt more especially upon the value of quinine as an antipyretic in pneumonia. A long series of experiments led him to pronounce against its use, and to recommend, rather, antipyrin or salicylate of soda. In the cases observed the drug was given by the mouth in solution. No experiment lasted less than four hours, and the temperature was carefully taken by the rectum. The patients were nearly all adult males, from nineteen to forty-five years of age, and an effort was made to obtain only uncomplicated cases. There was no uniformity observed either in the time at which, after this drug was given, the temperature began to fall, or in the duration of the fall.

The effects on the pulse and on respiration were neither consonant nor uniform; both were slowed, the pulse more often than the respiration. According to the experiments, the most that may be expected from 20 to 40 grains of quinine, admin-

istered daily to patients in the active stage of acute lobar pneumonia, is that it will reduce the temperature between one and two degrees F. in about half the cases, while in the other half the reduction will amount to less than one degree. Other objections were found to the use of quinine. It soon produces anorexia and nausea, or, in larger doses, retching and vomiting. A maximum dose produced marked cardiac weakness; cold sweats, epistaxis, profound nervous depression, and albuminuria were also found. The conclusion drawn was that large doses of quinine may not be given in treating pneumonia.

**Dr. Mary Putnam-Jacobi** followed with a paper on quinine in the pneumonia of children, and concluded that quinine averted the tendency to death, and was indicated when there was no fever, but only consolidation.

**Dr. Trinkright** still used quinine for its sustaining effects, although he did not find its antipyretic powers any greater than **Dr. Ripley** had done.

**Dr. Smith** considered that the rate of mortality was decidedly less than when quinine was not used.

**Dr. Jacobi** thought that many of the abortive results from the administration of quinine were due to its being given by the mouth at a time when the stomach was unable to absorb it. He considered it much more efficacious when given subcutaneously, and the best preparation for the purpose was the carbamide, in quantities of four or five grains.

Perhaps there is no disease in the treatment of which so many experiments have been made as in pneumonia. In no acute illness is it more often forgotten that it is the patient rather than the pneumonia that requires our treatment. Whilst death has sometimes occurred through the neglect of timely and prompt interference in lowering excessive temperature, the chances of the patient have much more often been sacrificed by the too panic-stricken a view taken of a pyrexia, which, although sharp, is of brief duration. It is probably only in those cases of pneumonia in which the temperature exceeds that normal to the disease, *i.e.*, in which more or less hyperpyrenia is present, that quinine is of value as an antipyretic; and with this reservation it is sometimes of great value both in children and adults, but especially in the former, its timely use appearing to steady the nervous system and to keep the temperature within bounds. It is too much to expect of the drug that it should materially lower what may be considered as the range of temperature normal to the disease. For such a purpose we must have recourse, with questionable advantage, to such



drugs as antipyrin. It is difficult to imagine a case of pneumonia in which aconite given seriously could do otherwise than harm. Calomel, although sometimes very valuable as a purge at the commencement of the illness, has long since been abandoned for any other purpose. In cases in which bronchial catarrh is a marked early symptom, antimony in small doses is often serviceable. The application of leeches gives immediate relief to pain in cases in which the blood tension is high. Morphia and bromides are valuable in the nervous shock of the initial stage, especially in persons of over-wrought nervous systems. In certain patients stimulants must be early given, and with a free hand ; but many cases of pneumonia are better without alcohol, and in all cases this remedy should be gradually reduced as early as possible in convalescence, since it tends to lessen the rapidity and completeness of absorption. In the pneumonia of drunkards full doses of tincture of iron and liq. ammonia acetatis may sometimes be usefully substituted for alcohol.

### **12. Open-air treatment of phthisis.**

Dr. Neale (*Brit. Med. Journ.*, 1886, vol. ii., p. 1098) relates a case which he treated successfully by the free admission of air to the sick chamber. The patient had phthisis dating from an attack of hæmoptysis in June, 1886, and at the time of the commencement of the open-air treatment, September 15th, 1886, he was rallying from a recent fresh attack of hæmorrhage, and presented the signs of a cavity in the right lung, with surrounding moist sounds, partly due to pneumonic softening, partly to inhaled blood. The left lung was fairly healthy. There was great emaciation, rapid pulse, high temperature, scanty and frequently stained expectoration. The patient was placed in a large room facing the south, cleared of all furniture except bare requisites. The bed was placed in a corner sheltered from draughts ; the window was left wide open at the top ; the bedroom door was kept open, together with the staircase window near the door and corridor of an adjacent dressing-room. Woollen clothing was worn day and night. At the same time it must be remarked that other remedies were simultaneously made use of. Iodine was freely distributed about the apartment, a pad soaked in terebene placed under the chin, food was pushed, cod-liver oil, iodoform, iron, belladonna, and oxide of zinc were all given.

At the commencement of the treatment the patient was very weak, and unable to walk. At the end of about six weeks, November 2nd, he was able to take fairly good walking exercise, had gained 8 lbs. in weight, and was about to start for a voyage to Australia.

I saw this patient both before and after the vigorous measures adopted by Dr. Neale. In answer to my inquiry as to the fate of the patient since leaving England, Dr. Neale informs me that he is travelling about in Australia in very fair health, the physical signs, except those of contracted cavity, having disappeared.

It would, of course, be an error to attribute the result in this case solely to the open-air plan adopted, measures of an antiseptic kind and abundant nourishment adapted to the case—one of caseous pneumonic phthisis, with rapid eliminative softening of products—having been also employed. But the case affords a good example of that system of free ventilation in the treatment of consumption, to secure which is an important aim in the selection of a suitable climate, but which can often be equally well effected at the patient's home.

### **13. Turpentine in phthisis.**

Prévost (*Gaz. des Hôpitaux*, No. 35, 1886), following Bremond, has used turpentine in phthisis by immersing the body in turpentine vapours, whilst the head is protected. For this purpose a special apparatus is, of course, necessary. The turpentine can be recognised in the urine and breath. Two patients showed great improvement of the general condition, increase of body weight, and amelioration of the lung symptoms after this treatment.

### **14. Sulphuretted hydrogen injections in phthisis.**

Bergeon, whose treatment was noted in the "Year-Book" for 1886 (p. 30), has made further communications and experiments with his method, and during the year many observers have tested its effects, with varying results. The apparatus required was figured in a paper by Dr. J. Henry Bennet in the *British Medical Journal* for December 18th, 1886. It consists of a carbonic acid generator, from which a balloon of indiarubber is filled with the gas. A flask with a cork perforated for two tubes contains a sulphuretted solution, and through this is drawn by a caoutchouc syringe the carbonic acid gas. The mixture is then injected into the rectum, in the proportions of 4 or 5 litres of carbonic acid gas, passed through 250 to 500 grammes of sulphuretted water, the operation being repeated twice in 24 hours. Bergeon's results, as formerly reported, were confirmed by Cornil and Chantemesse since our last account. Bergeon has announced that the treatment is equally efficacious against simple inflammatory and tuberculous laryngitis or pharyngitis, and that the results are good in active phthisis, pneumonic phthisis, and galloping phthisis. In the latter grave affections the treatment caused fall of temperature, disappearance of sweats, diminution of cough and expectoration, and, if not cure, at least arrest, in the progress of the disease.

Bergeon showed at the Academy of Medicine in Paris a case in which there were present large cavities in the lungs and ulceration and destruction of the vocal cords. There was aphonia and intense dysphagia, so that swallowing was almost impossible on account of the pain it caused, and the patient, therefore, voluntarily refrained from food. Yet the laryngeal ulcers began to cicatrise when the treatment had been tried for two or three weeks, and eventually they healed.

Bergeon originally recommended, and still insists, that the sulphuretted hydrogen should be obtained from natural mineral waters; nevertheless, other observers have not thought this necessary. Bardet has used an artificial water; Cohen, Bruen, and Wood (see below) have used a solution of chloride of sodium and sulphide of sodium, through which the carbonic acid is passed.

Bergeon himself is still somewhat guarded in the explanations he gives of the effects of his treatment. It is certain, he says, that local lesions are cured by his method of treatment, but the bacilli, although they diminish in quantity, are still found in the sputum, and, therefore, the germs of the disease remain.

Cadier and Ruanelt, mentioned by Dr. Bennet, it should be remarked, do not confirm Bergeon's results in the treatment of tuberculous laryngitis.

Dr. Bennet (*Brit. Med. Journ.*, Dec. 18th, 1887), who describes Bergeon's apparatus, adds his testimony to its efficacy. He quotes cases which he has seen derive benefit from the method under the care of other physicians, and in one case, under his own care, the ultimate death was preceded by an unhopèd-for rally under the influence of the injections. He had also seen them do good in obstinate asthma.

Dr. Burney Yeo (*Lancet*, vol. i., p. 761, 1887) describes the apparatus devised by Dr. Bardet, of Paris, which has the advantage of being easily portable, simple, and inexpensive. A sulphuretted solution is used by Bardet, containing 10 grammes of sodium sulphide in 100 cubic centimetres of distilled water. A cubic centimetre of this solution sets free 10 cbc. of sulphuretted hydrogen when treated with an acid solution made by dissolving 25 grammes of tartaric acid and 1 gramme of salicylic acid in 100 cbc. of distilled water. One cubic centimetre of the acid solution displaces the sulphuretted hydrogen of 1 cubic centimetre of the first solution, and thus the amount of gas made use of can be accurately measured. Both solutions may be obtained from Messrs. Bell, of Oxford Street.

Dr. Yeo used only one injection a day, but, from his so far limited investigation of the method he corroborates the opinions



of others as to the value of the treatment. He observed a gain of flesh and strength, and an expression of general amelioration. The pulse, temperature, and respirations fell, and the expectoration diminished, while there was improved rest at night. No ill effects were observed.

### **15. Rectal injection of gases in pulmonary disease.**

Dujardin-Beaumetz (*Bulletins de la Société de Therap.*, Nos. 16 and 21, 1887) agrees in his results with Bergeon, of Lyons. The cases which were most markedly benefited by this treatment were chronic bronchitis, in which the difficulty of breathing, the cough, and expectoration, were diminished. The appetite and sleep were much improved, and the body weight increased. In cases of phthisis the general health was improved, as were also the symptoms referable to the chest, but the bacilli in the sputum remained undiminished. From 2 to 4 litres of the diluted sulphuretted hydrogen mixture were slowly introduced into the rectum at each séance. Of other gases only carbon bisulphide and iodoform vapour seem at all useful or admissible.

H. C. Wood (*Therapeutic Gazette*, April, 1887) also gives his opinion and experience of the treatment carried out similarly at the Philadelphia hospital. Good results followed in many cases. Dr. Wood suggests that the good effects are due to the action of the sulphuretted hydrogen on inflamed lung tissue, and that there is no proof of its efficacy in destroying the tubercle bacillus, or in increasing the resisting power of the individual to the action of the bacilli. He reports cases of asthma with chronic catarrh and emphysema, of catarrhal pneumonia with abundant purulent expectoration, and of broncho-pneumonia with excessive expectoration and alarming symptoms, all of which were relieved by the treatment very speedily. Ill effects occasionally resulted. Thus, the injections sometimes caused attacks of colic, and in one case after the injection into the rectum of a quart of gaseous mixture, containing equal quantities of sulphuretted hydrogen and carbonic acid, the patient became unconscious, the breathing became very rapid and shallow, the pulse quick and feeble; the man appeared to be dying, but recovered in about a quarter of an hour.

Solis Cohen and Bruen (*Philadelphia Med. News*, May, 1877, see *Med. Chronicle*, vol. vi., p. 401) have investigated this treatment, injecting carbonic acid gas passed through sulphuretted mineral water.

Cohen has had favourable results, but is not very positive as yet in his opinions.

Bruen has tried the treatment in twenty-five cases, and his results are thus summarised by Dr. Ransome :

1. In nearly all cases lasting effects have been secured in the reduction of temperature, suspension of night-sweats, lessened cough and expectoration, and in some all physical signs of bronchial catarrh abolished.

2. Temporary reduction of pulse rate fifteen to twenty beats, and temperature one-half a degree to one degree during the administration of the gas.

3. The amount of gas introduced into the bowel varied from three quarts to a gallon at each injection. It was introduced slowly, from fifteen minutes to half an hour being demanded by the operation. The administration has been practised in most cases twice in the twenty four hours. No injurious effects from the gas were observed.

4. Administration of the gas in different amounts and varying degrees of concentration is now being practised, and also investigations into the characteristics of the sputa.

5. In only one case were the effects of the gas entirely negative.

6. In cases of phthisis complicated by intestinal lesions, experience is still insufficient to make it possible to state positive results.

7. The ultimate value of the treatment can only be established by time. The probable mode of action would seem to be anti-septic, and by the reduction of suppuration and the relief of the attending serious symptoms, the patient is permitted to gain by food, exercise, and general treatment. Thus far, the value of the gas seems to be that of a useful therapeutic measure, rather than a curative plan of treatment.

8. The method of preparing the gas for use in the hospital was as follows: The carbonic acid gas was passed through a solution of chlorate of sodium and sulphide of sodium, of each 5 grains, in thirty ounces of water. The proportion of salts was increased in some cases, and trials of other combinations are in process. (*See also Transactions of Assoc. of American Physicians, 2nd Session, p. 154*).

Statz (*Deutsch. Med. Wochenschr.*, August 11th, 1887) has employed this treatment, making use, however, of Weilbach waters instead of those of Eaux Bonnes, used by Bergeon. Ten cases were treated, two of which were mild, the others severe. In six cases remarkably good results were obtained. The weight increased greatly, the expectoration diminished, appetite returned, and strength was restored, while the local conditions in the lungs underwent favourable changes, and the well-being of the patients was much furthered. Two cases died, and in two others no

improvement was noted. In one case the injections caused severe pain, but here there was probably tubercular ulceration of the bowel. As in Bergeon's cases, the bacilli of tubercle did not disappear. Further, Statz supports Bergeon in requiring that artificial solutions of sulphuretted hydrogen should not be used. These, he finds, are irritating, and the relief of breathing is not experienced after their use.

**Drs. Shuttuck and Jackson** and **Drs. Pepper and Griffith**, in papers communicated to the Association of American Physicians (*Trans.*, 1887), found little or no benefit to be derived from the treatment. The former observers used an ordinary water into which  $H^2S$  gas had been passed for from five to three minutes, and calculated that the water thus prepared contained double its volume of gas; they advise that the water yielding the gas be made hot before passing the  $CO$  through.

In connection with Bergeon's treatment, it is to be noted that Peyron injected 150 cbc. of a saturated solution of sulphuretted hydrogen into the rectum of a dog in two doses at an interval of three minutes. Death took place in ten minutes. Similar experiments with varying strengths of solution convinced Peyron that sulphuretted hydrogen is harmless only when injected in small doses. **Morel** has commented upon these experiments, and has shown that the quantities injected were enormous when compared with those used in Bergeon's method. The actual amounts injected were ten or fifteen times larger than those used medicinally, while, if the relative weights of the dog and of man are considered, the disproportion becomes absurd. **Morel** gave certain hints as to the administration of the remedy, which may be of value. The patient should be on his back, so as to allow free entry of the gas, and the breathing should be watched, especially when the pulmonary lesions are extensive, since deficiency of respiration will make the elimination of the gas more difficult. (*Brit. Med. Journ.*, i. p. 351, 1887.)

**Dr. Hassall** (*Lancet*, July 2, 1887) furnishes some interesting and suggestive analyses made at his request by Mr. Clayton, F.C.S., and Mr. Knott, to show the relative strengths of the different sulphuretted solutions employed by different observers. He shows 1 gallon of Eaux Bonnes water used by Bergeon himself to contain 25.94 cc. (1.58 c. in.)  $H^2S$  before carbonic acid gas had been passed through; afterwards 4.04 cc. (0.25 c. in.). One bottle of the same water yielded 3.997 cc. (0.24 c. in.) before, 0.623 (0.0038 c. in.) after  $CO^2$  had been passed through. Half a bottle of the Eaux Bonnes water, containing, therefore, half this quantity of the gas, was usually employed by Bergeon at each



sitting. Dr. Bardet's solution, advocated by Dr. Yeo, and which has been largely used by others, contains, according to Dr. Hassall, in the 100 cc. used, about 6 cb. in. of the gas. Dr. Coghill, of Ventnor, who (*Brit. Med. Journ.*, May 21, 1887) speaks well of the treatment, has employed a saturated solution of  $H_2S$ ,  $1\frac{1}{2}$  oz. to 2 oz., of which solution he adds to 12 oz. of water, which would yield from 3 to 4 cub. in. of the gas. There is thus, Dr. Hassall points out, a very great discrepancy between the gaseous strengths of the solutions, and yet up to the time of his writing "a great and surprising amelioration had in every case ensued."

During the first half of the present year some enthusiasm was manifested in many quarters for Bergeon's treatment of phthisis. Later, however, this enthusiasm greatly waned, and at the present moment but few physicians would advocate the treatment with any warmth. It is certainly, however, premature to deny its efficacy altogether and in all cases: a few further considerations will, perhaps, help towards the attainment by further observation of a right judgment in the matter. I have myself tried it at the Brompton Hospital in a few cases (using Bardet's method) showing pronounced hectic fever and with tubercular lesions attended with patches of secondary broncho-pulmonary congestion. No permanent results were obtained in these cases, but some amelioration of cough and fever was manifested during the treatment. Careful experiments, by making the patients exhale from time to time during and after each *séance* into wash bottles charged with acetate of lead solutions, and by the application of lint soaked in the same solution to the surface of the body, gave no evidence of any exhalation of sulphuretted hydrogen from the lungs or skin. Similar observations were made by some of my colleagues.\* In one case which I placed under the treatment at the Middlesex Hospital in the summer the beneficial effects seemed very striking. It was a case of phthisis, with softening of the lungs at both apices, cavities having formed on one side and the base of that lung presenting the patchy crepitant sounds significant of secondary catarrhal pneumonia. The patient was losing ground rapidly, with the usual symptoms of hectic and profuse expectoration, was wholly confined to bed, and scarcely strong enough to sit up for examination when Bardet's modification of Bergeon's treatment was commenced, employed once daily. After the first week the patient began rapidly to mend, hectic

\* Dr. Bruen (*Trans. Assoc. Amer. Phys.*, 1887, p. 155) found only a faint reaction on holding filter paper saturated with acetate of lead to the mouth in two cases out of ten; Drs. Shattuck and Jackson (p. 164) obtained no reaction at all.

abated, the physical signs of broncho-pulmonary congestion subsided, cough and expectoration greatly lessened, and in a month he was up and able to get into the garden. On leaving the hospital the physical signs of cavity were still evident, but the moist sounds scattered over the lungs had to a great extent disappeared. Bergeon's was the only new element of treatment introduced, and it was tried rather as a last resort. Those, however, who are conversant with the vicissitudes of active phthisis would require the evidence of many like cases before confidently attributing the very striking result to the remedy employed. It is probable, however, that the presence of the secondary catarrhal pneumonic centres alluded to rather indicate the kind of case to which the treatment is most adapted.

Assuming Dr. Hassall's report to be correct, it is hardly conceivable that any real results could have been obtained by the agency of such infinitesimal doses of sulphuretted hydrogen as those employed by Dr. Bergeon; and if the fifty times stronger solutions used by those who adopted Bardet's apparatus nevertheless resulted in no appreciable exhalation of the gas from the lungs, it is hardly possible to suppose that the minuter doses employed by others ever reached them. It is further open to question whether, supposing such sulphuretted hydrogen to leave its chosen seat, it would traverse the blood unchanged; it would more likely be converted into a sulphide, and partially be further oxidised into a sulphate which, being non-volatile substances, would be eliminated by the kidneys and bowels rather than by other channels. After a careful trial of Bergeon's treatment, Dr. Heron\* reports (*Brit. Med. Journ.*, May 21, 1887) "in not one single instance in which the treatment was carried out under my supervision was there the slightest evidence of any permanent good result having been achieved." A diminution of the amount of expectoration, an occasional lessening of the cough, and an unimportant lowering of the temperature were observed. As these results can be secured by means less unpleasant to the patient than Bergeon's method, Dr. Heron has ceased to employ it in the treatment of tubercular disease of the lungs.

#### **16. Sulphuretted hydrogen by the mouth.**

Dr. Wood (*Trans. Assoc. of Amer. Phys.*, 1887, p. 173) has tried the administration by the mouth of sulphuretted hydrogen water, and the effects have seemed to be the same as those obtained by rectal injection. He takes at first half an

\* Dr. Heron informs me that he took much pains to use the apparatus and methods of Bergeon, employing at first natural Eaux Bonnes water, later on artificial water of the same strength.



ounce, then an ounce, of a saturated solution of sulphuretted hydrogen into a tumbler, and runs into it two or three ounces of carbonic acid water from a syphon, the whole being drunk while effervescing. This is given three to five times a day. He also suggests the rectal injections of sulphuretted hydrogen water should take the place of the gaseous mixture, and so possibly some of the disagreeable symptoms might be avoided.

### **17. Aniline in phthisis.**

In the early part of the year Dr. Kremganskis, who was formerly professor of medicine at Charcow, pointed out that aniline is very poisonous to bacilli, but not, according to his own statement, to a human being. He therefore recommended that the blood of a phthisical patient should be saturated with aniline, in order that the tubercle bacilli might be killed and the disease cured. He suggested that the drug could be introduced into the system by means of inhalations of atomised aniline several times a day, and that if the inhalation of fresh air, turpentine, acids, and eucalyptus oils were simultaneously employed, no danger would result.

Nesteroff, of Moscow, tried the treatment in the case of a patient affected by phthisis, but not to an advanced degree. Under the aniline treatment, however, she grew gradually worse, and died in two weeks. Nesteroff declares that the treatment killed her.

The Moscow Congress appointed a committee to investigate the subject, and its members have reported most unfavourably. They made experiments upon animals, and showed that when aniline combined with oleum gaultherii was introduced into the blood, directly, subcutaneously, or by inhalation, the animals died in a few hours from paralysis of the respiratory centre: clinically, it caused patients extreme disgust, and was utterly useless therapeutically (*Brit. Med Journ.*, i., pp. 579, 789, 842, 1887).

### **18. Salol in phthisis and diphtheria.**

Georgi (*Berl. klin. Wochenschr.*, Nov. 9, 1887). In pulmonary phthisis the author begins by giving .5 grammes, carefully observing the effect of this dose on the fever, and raising the dose until the temperature is decidedly lowered. The amount may be increased up to 5 grammes within nine hours without producing unpleasant by-effects.

In diphtheria, likewise, this drug has been found to answer well, as also in various forms of stomatitis, from whatever cause arising. For these cases it should be used as a gargle (5 : 100) in alcoholic solution, to be largely diluted with water.



**19. Antifebrin in phthisis.**

Cauldwell (*New York Medical Record*, April 16, 1887) has investigated in thirty cases the effect of antifebrin in the feverish attacks of phthisis, and arrives at the following conclusions:

1. Antifebrin is the best drug with which to control the chills and fever of phthisis. With it we can at once check these depressing symptoms.

2. It does not produce the unpleasant effects of quinine, salicylic acid, antipyrine, thallin, or resorcin.

3. Chills, collapse, or semi-intoxication are not caused by it.

4. In many patients it induces sweating.

5. It diminishes the frequency of the pulse, and usually strengthens the heart's action.

6. Occasionally it produces cyanosis. This happened but twice in thirty cases.

7. It does not interfere with digestion, but, on the contrary, increases the appetite.

8. Even when the stomach is in an irritable condition it can be retained.

9. It increases the secretion of urine in the majority of cases.

10. It tends to quiet the nervous system and produce a feeling of "well-being" in the patients.

His cases are divided into three groups, and it is to be noted that they were obtained from all classes, and the patients were widely different in habits and age, so as to avoid errors from differences in these respects.

Those of the first class, nine in number, had slight consolidation in one lung only. In these cases the antifebrin, given in doses of 7 grains four times a day in 1 oz. champagne, produced at once excellent effects; the temperature became normal, the pulse was slowed and strengthened, the digestion was improved, and the tongue cleaned. The urine was increased, and the chest pains and other nervous sensations which had annoyed the patients were relieved. In the second class were eleven cases, in which considerable patches of consolidation, with or without softening, were present. In these patients antifebrin, in doses of 10 grains at 8 a.m. and 4 p.m. in dilute whisky, produced occasionally a certain amount of cyanosis of the lips and finger tips, and in several free sweating occurred, which was controlled by the addition of agaricin (gr.  $\frac{1}{6}$ th an hour before bedtime) to the treatment. The third class contained ten patients, who presented signs of a cavity in the lungs, and even here good was effected by the treatment, since restlessness disappeared, and in no case

did the chills and fever resist the drug (10-gr. doses, with  $\frac{1}{5}$ th-gr. agaricin contained in capsules taken daily at 9 a.m. and 9 p.m., a little aromatic ammonia being used as the accompanying stimulant).

Dr. Cauldwell makes a valuable practical suggestion in recommending that the antifebrin be taken always in some stimulant, otherwise the drug is very apt to cause a considerable amount of temporary depression. Antifebrin, moreover, is very insoluble in water, but dissolves well in a little wine or spirit. Dr. Cauldwell's doses were rather large, and in commencing treatment a safe dose would be 5 grains, gradually increased if necessary.

## **20. Hæmoptysis, subcutaneous use of atropin in.**

Hausmann (*International Klinische Rundschau*, No. 5, 1887) has employed very successfully a treatment for hæmoptysis, recommended by Tacke in 1882, namely, the injection of atropin subcutaneously, one or more times daily, in doses of  $\frac{1}{300}$  to  $\frac{1}{130}$  grain. Ergotine, turpentine, injections of morphia, digitalis, iron, restricted diet, and rest are all of service occasionally. Nevertheless, Hausmann has found the atropin to succeed when other means failed. He gives the following cases as illustrative of his method of treatment. A patient with cavernous signs in the lungs was reduced to a very alarming condition by hæmoptysis, which occurred twice daily for six days, but this was stopped by injections of about  $\frac{1}{200}$  grain of atropin; a recurrence at a late period yielded to the same treatment. A patient had suffered at St. Remo from hæmoptysis, which continued all winter, and only ceased in summer. At Meran, where he was under the care of Dr. Hausmann, he was similarly attacked, but at once relieved by atropin. Another case is given where hæmoptysis had been treated for eight days by ergotine, turpentine, and other remedies, but in vain, yet the bleeding ceased at once after injection of atropin.

## **21. Intrapulmonary injection of iodoform.**

Ransome (*Med. Chron.*, p. 281, Jan., 1887). In one case of gangrene of the lung and several of pulmonary phthisis, this treatment was tried. In the first case a gangrenous cavity existed at each base, and the sputum was offensive and of a prune-juice character. An ethereal solution of iodoform (1 gr. in 5 minims) was injected into the cavities daily. This was continued with short intermissions for about six weeks, when an emulsion of iodoform in cod liver oil was used, with less pain to the patient. The treatment was pursued for several weeks, during which time the patient gained in weight, the sputum diminished in quantity, and the general health greatly

improved. Finally, although one of the cavities still remained, cough and expectoration disappeared, and no other signs of ill-health were perceptible. In the other cases, where phthisis was diagnosed, no great or permanent benefit was produced, and in one case, where apparently the injection had found access to the circulatory system, very alarming symptoms were produced. It is suggested that in cases of tuberculosis more injections are needed to disinfect the lung than the patient would willingly submit to.

Dr. C. T. Williams (*Pulmonary Consumption*, 1887, p. 430) devised a syringe for intra-pulmonary injections capable of holding 1 drachm with a fine aspirator needle tube about four inches long ending in a solid double-edged harpoon point. The fine tube towards its end was perforated in three or four places so that the fluid when injected should issue in a series of lateral jets at right angles to the point. No symptoms followed the injection of a 15 per cent. solution of sulpho-carbolate of sodium in a case of phthisis.

## 22. Injections of eucalyptol in phthisis.

Bouveret and Pécharde (*Lyon Médical*, Feb., 1887) have used subcutaneous injections of eucalyptol in the treatment of phthisis. Locally, irritation and pain were produced, but never suppuration. After the injection a sensation of heat in the chest, or cerebral excitement, giddiness and heaviness in the head, were occasionally experienced, and in two cases there was epistaxis. It appears from the observations that eucalyptol has no influence on the tubercle bacillus, nor does it prevent the fever of tuberculosis, nor the spread of the disease. In several cases the quantity of expectoration was lessened, and it is probable that the essence, being eliminated by the air passages, may exert a favourable influence on the secretions of cavities, or on the mucous membrane. The cases which benefited most were those without fever. Very rarely, however, were the physical signs modified. The authors believe that their results, discouraging as they are, are quite as good as they obtained by gaseous injections into the rectum.

The eucalyptol was obtained pure and diluted to  $\frac{1}{4}$ th or  $\frac{1}{6}$ th with "petro-basiline." The injections of the fluid thus obtained were made twice daily into the skin of the arm or thigh, in increasing doses, until  $1\frac{1}{2}$  or 2 grammes of eucalyptol were given daily.

At a meeting of the French Academy of Medicine, M. Ball made a communication upon the same subject. He considered that subcutaneous injections of eucalyptol "produced cessation of night sweats and diarrhœa, diminution of expectoration and fever,



and general improvement of the body state." M. Ball believed that it counteracted the septic phenomena of the disease. He had tried it in twenty-one patients, of whom six had died, ten were improved, and five were still under treatment. He used one gramme at each injection, of a mixture of eucalyptol with four times its volume of olive oil. In one case the bacilli which had been present in the sputum had disappeared. This effect upon the bacilli **Dujardin-Beaumetz** could not confirm, but he also had noted very beneficial results from the method, although he had occasionally noted ill effects, such as symptoms of oppression, when the expectoration was diminished, and the constant exhalation of the eucalyptol caused disgust. He used a solution of eucalyptol of 20 to 30 per cent. in liquid vaseline, injecting a half to one gramme of eucalyptol daily. His opinion was generally against the treatment, and he had obtained equally good results with arachis oil (*Brit. Med. Journ.*, i. p. 1177, 1887).

**Williams** (*loc. cit.*, p. 432) has tried on two patients at the Brompton Hospital the subcutaneous injection of Dr. Meunier's, of Lyons, solution—iodoform, 5 centigrammes; eucalyptol, 18 milligrammes, dissolved in vaseline. Five cub. cent. (31 gs.) were injected under the skin of the abdomen once daily for a month. The whole was absorbed in about ten minutes, but no effect was observed on pulse, temperature, cough, or expectoration.

### **23. Creosote in pulmonary tubercle.**

**Fraentzel** (*Deutsch. med. Wochens.*, No. 14, 1887) has re-introduced this remedy in cases of phthisis, not as a specific cure for the disease, but as a remedy which in a minority of cases exerts a favourable influence. In private practice the author begins with 1 gramme of creosote, to which are added 2.5 grammes of tincture of gentian and 25 grammes of rectified spirits, the whole being made up to 100 grammes with sherry wine. Of this a teaspoonful is taken three times daily in water. The amount of creosote is gradually increased to 2, rarely to 3 per cent., of the mixture. Slowly progressing cases only admit of this treatment, and some patients do not bear it at all. When the fever is continuous, or exceeds 101.5° F., creosote is not to be recommended. Any good effects are usually manifested within a few days after commencement of treatment, and consist in improvement of the appetite and diminution of cough and expectoration and difficulty of breathing; to these are added a subjective sense of improvement and increase of body weight. Thus the author records a gain of 20 to 30 pounds within the winter months. Should no improve-

ment appear within the first month, nothing can be expected from the remedy. In the most favourable cases, Fraentzel was able to discover diminution of the dulness existing and a decrease in the râles. The amount of bacilli in the sputum does not appear to be altered, but the latter may entirely disappear. Out of 400 cases, this treatment so far improved fifteen that they left the hospital fit for work, and frequently the improvement was permanent. In a few cases there arose nausea and vomiting, together with anorexia and diarrhœa. For hospital patients, especially those accustomed to drink, a larger dose is found useful, viz., 1·35 grains per cent. of creosote, a tablespoonful to be taken three times daily. Creosote vapour, in the author's experience, had no beneficial effect.

Fraentzel's prescription may be rendered into English formula thus :

R	Creosote	...	...	...	min. xv.
	Tinct. gentian	...	...	...	min. xl.
	Spt. vini rect.	...	...	...	3vj.
	Vini Xeres	...	...	...	q s. ut fiant, ʒiv.
ʒss. ter die ex aquâ.					

**Julius Sommerbrodt** (*Berl. klin. Wochensch.*, No. 15, 1887) confirms Fraentzel's views regarding creosote, but recommends its use in all patients suffering from any form of tubercle. The results are so favourable that he regards it almost as a specific, certainly not as a mere cure for some of the symptoms. The creosote was first given in solution (13·5 grms. to 1 litre of Malaga wine), but latterly in form of capsules, which contain ·05 grms. of creosote and ·2 of balsam of tolu, and which are both cheaper and more convenient. The author begins with one capsule on the first day, two on the second, and then gives three per diem for a week ; they are taken immediately after the three chief meals. In the second week, four capsules are taken ; in the third, five ; and in the fourth, six capsules, at the same hours of the day. If they agree well, and this is the rule, six capsules a day are continued for two months, when nine are given. This treatment must be continued for at least three months, but may be with advantage extended over a year. Most favourable results were obtained in laryngeal phthisis, pulmonary phthisis, and scrofula. The cough was the first symptom to disappear.

#### 24. The mountain cure of phthisis.

**Creighton** (*Brit. Med. Journ.*, i. p. 822, 1887) speculates upon the method by which mountain air benefits patients affected with tuberculosis or anæmia. Persons who remove to high latitudes suffer at first from the *mal des montagnes*, which is

characterised by dyspnœa, quick pulse, palpitation, giddiness, fainting, nausea, muscular pains, and fatigue. After a time, however, they become acclimatised, and their children, born at the high altitude, never pass through such a stage of morbid phenomena. A similar condition is seen in animals. Jourdanet asserted that the *mal des montagnes* was owing to a sudden diminution of the oxygen of the blood, due to the fact that the tension of the gas in the air of the high level was lower than in that of the low level, and that hence the hæmoglobin of the blood could not hold such a large quantity of oxygen as it did at a lower altitude. After a time, however, the system accommodates itself to its surroundings by producing a further amount of hæmoglobin, which, even at the prevailing low tension, would carry an amount of oxygen amply sufficient for the needs of the system. This was proved experimentally by the late Paul Bert, in 1882. Thus, then, would chlorotic patients benefit by removal to a high altitude, provided that the body had still left a sufficient recuperative power. Dr. Creighton points out, further, that tuberculosis is characterised by an overgrowth of tissue without a sufficient vascularisation. This would be admitted, no matter what additional views might be held as to the ultimate pathology of tuberculosis. Similarly, Dr. Creighton maintains that the tubercular diathesis means feeble vascularisation, and, moreover, that any force which helps blood-making will also help vessel-making. Hence a general stimulus to the greater production of hæmoglobin in the blood, such as is provided by a rarefied atmosphere, would directly counteract the tendency of the tubercular process, and promote the obsolescence of its products.

### **25. Should the pleural cavity be washed out?**

Under the above heading Basil (*Med. Chron.*, vol. vi. p. 371) discusses the various explanations which may be given of the cases of sudden death occasionally observed after washing out the pleural cavity. From an analysis of cases, he shows that the unpleasant symptoms have always set in after repeated washing, never during the first washing, and they have come on during the inflow of the injection. Basil concludes that the death occurs from reflex inhibition of the heart by means of irritation of the terminal fibres of the vagi in the pleura, and also from direct irritation and consequent arrest of the heart, by fluids injected in its close proximity. With reference to the treatment of pleural effusions, Basil shows that there is but little danger in washing out the pleural cavity of children. In adults, however, care should be exercised. Thus:

1. Solutions capable of acting as strong irritants to nervous



filaments should be avoided ; such a solution as, it is said, even half an ounce of tincture of iodine to a pint of warm water.

2. Fluids containing elements which act as powerful depressants when applied to the neighbourhood of the heart must be avoided, such as chlorine, nitric or acetic acids, salts of sodium, etc.

3. Too much fluid should not be injected.

4. The fluid should be delivered slowly.

5. Care should be taken not to direct the stream of fluid directly against the heart or large nerves.

6. The fluid should be neither too hot nor too cold.

Finally, it is suggested that atropia may be administered before the operation to ward off the danger of reflex cardiac inhibition.

## **26. Treatment of pleuritic exudation.**

Immermann (*Deutsch. med. Wochensch.*, No. 9, 1887) discusses carefully the indications which render operation desirable in cases of serous or purulent pleuritic effusion. He considers that thoracentesis should not be performed if the fever subsides early ; for instance, before the end of a month, if the exudation is not very great, if the heart is not greatly displaced, and if the exudation commences to be absorbed when the fever disappears. The operation should be resorted to whenever the absorption of the exudation ceases or is delayed after the fever has disappeared. Again, the operation should not be attempted so long as the presence of fever indicates that inflammation is still going on, provided that the presence of the exudation in itself does not endanger life, and that there is no reason to suspect the existence of a purulent effusion. If pus be present, it must be removed forthwith. Immermann strongly recommends an operation introduced first by Curschmann, in which the principle of the syphon is made use of for removing the fluid. The chest is first punctured by a trochar and cannula, and through the cannula is passed a caoutchouc tube filled with some antiseptic fluid. The cannula is withdrawn, leaving the tube *in situ*, and this latter is now clipped near its exit from the chest. A clip which has during this time been placed over the lower end of the tube is removed, the cannula slipped over it, and the end placed into a flask containing a quantity of antiseptic fluid. On relaxing the clip near the chest, the exudation flows gently into the receptacle, and the lung expands to take its place. Arrangements are made by means of perforations in the cork of the flask for aspirating or injecting the pleural cavity through the tube. After a time, as the discharge diminishes, a receptacle so small as to be carried in the pocket may be substituted for the larger one at first

employed, and the patient, with the apparatus *in situ*, may attend to his usual duties. Occasionally the intercostal spaces are too narrow to allow of this method being carried out, as, for instance, in young children and in very old patients. Finally, if the procedure should from any cause prove ineffective, it may be followed by one of the ordinary methods of thoracentesis.

**27. Resection of ribs without opening the pleural cavity in certain cases of sero-fibrinous effusion.**

Westbrook (*New York Med. Journ.*, p. 292, March 12, 1887) calls attention to the fact that certain cases of sero-fibrinous pleuritic effusion are sometimes unconsciously neglected, and that serious mischief ensues thereupon. In persons past forty years of age the chest-wall has become rigid from calcification of the cartilages. Now, if fluid be present in such a chest a difficulty arises as to its removal, for the following reasons. In order that the fluid may be withdrawn by aspiration, the lung must expand partially or completely, or the mediastinum must be displaced toward the affected side, or the diaphragm must ascend and the chest-wall sink in. But if the lung has been long collapsed, it becomes bound down by lymph, and does not easily re-expand. Moreover, in the class of case under discussion, the mediastinum and the diaphragm may be already displaced as much as is possible; the chest-wall will not collapse, and still some fluid remains. This will not flow through the aspirator under the existing mechanical conditions, and if the lung is left unrelieved, tuberculosis is very apt to set in. Dr. Westbrook hence proposes to adopt the method of resection of ribs usually performed for the cure of empyema, in order that the rigidity of the chest-wall might be overcome; and from one case which he reports he draws the following conclusions:

1. That primary union of the wound may be expected even in a debilitated person beyond middle life.

2. That the operation can be performed without any fear of converting the serous into a purulent exudation. It is to be noted that the operation recommended is simply resection of the ribs *without* opening the pleura.

3. That the operation greatly diminishes the extent of the cavity; and

4. That it may be followed by diminution of the cough and expectoration. It is suggested that the fluid should not be removed mechanically after the operation, but be allowed to disappear by absorption.

**28. Treatment of empyema by perflation.**

Dr. Ewart (*Med. Chir. Trans.*, 1887, p. 223) relates the case of

a boy with empyema consequent upon localised gangrene of the lung, secondary to enteric fever, in which, after partially relieving the pleura by two free openings (one at the fifth space in the anterior axillary line, the second in the ninth space in the line of the scapula angle), perflation was performed by means of a Richardson's bellows of carbolised air, the current being directed through the anterior opening and allowed to escape through the posterior. In a short time the posterior opening became blocked and distended by something which, under the influence of rising pressure, was forced out, and was found to be a wedge of necrosed lung. Some false membrane was expelled at subsequent perflations, and the boy made an uninterrupted recovery.

The principles upon which this method of treatment is based are the specific lightness and ready diffusibility of air, which causes it, whilst pressing equally in every direction, to occupy the upper levels, and thus to exercise outward pressure upon fluids and solids in the pleura, which gravitate towards the most dependent part when an opening is provided for their exit.

**Roser** (*Archiv. der Heilkunde*, vol. v., 1864), as pointed out by Dr. Ewart, first suggested the method re-introduced independently by him, but did not employ any antiseptic precautions.



# DISEASES OF THE NERVOUS SYSTEM.

BY JAMES ROSS, M.D., LL.D., F.R.C.P.,

*Senior Assistant-Physician to the Manchester Royal Infirmary, and Joint Professor of the Practice of Medicine in the Victoria University.*

---

## 1. Electrical treatment.

The past year has afforded the usual testimony to the value of electricity in the treatment of various diseases of the nervous system by the reports of successful cases, but it has been singularly deficient of improvements in the necessary appliances, and of proposals of new methods of application. The chief event of the year, so far as this kind of treatment is concerned, is afforded by the fact that Erb's great work on Electro-Therapeutics has been placed within the reach of the English reader in the excellent translation of Dr. de Watteville and his coadjutors. ("Electro-Therapeutics," by William Erb, M.D. Translated by A. de Watteville, M.D., with the assistance of J. Cagney, M.D., and A. J. S. Ker, M.D.)

## 2. Massage.

Dr. A. Symons Eccles (*Brit. Med. Journ.*, p. 113, Jan. 15, 1887, and *Practitioner*, p. 401, June, 1887) has investigated the physiological effect of massage. After subjecting the manipulations of which this complex process consists to analysis, he tries to define the share which each takes in the production of the general result. (1) Rubbing (*effleurage*) stimulates the muscles of the skin, produces dilatation of the superficial vessels, promotes insensible perspiration, incites the cutaneous reflexes, and by acting on the cutaneous nerves increases the strength of the circulation and the rapidity of the pulse. (2) Kneading (*pétrissage*) forces the lymph out of the muscles, increases the velocity of the blood-current through the part, produces temporary decrease in the size of the limb, increases its muscular power, and reduces the pulse-rate, especially when the abdomen is subjected to kneading. (3) *Massage à friction* is a combination of rubbing and kneading; it consists of a series of rapid circular rubbings with

the palm or surface of the hands and finger-tips, combined with strong upward friction of the limb, and is especially applicable to the manipulation of joints. (4) Tapping (*tapotement*), a series of blows given rapidly with the ulnar border of the extended hand, excites muscular contractions and dilates the blood-vessels, thus allowing of more rapid material exchanges. The author states that after a month of daily *séances* the effects on the skin were that it became softer and more pliable, the veins were more distinct, the colour was deeper, and sensation, which is blunted immediately after the manipulations, became ultimately increased in acuteness. At the close of each sitting the temperature rose in the axilla from  $6^{\circ}$  F. to  $1^{\circ}$  F., and the temperature of a limb after ten minutes' massage was higher than its fellow of the opposite side often by as much as  $4^{\circ}$  F. The effects on the weight of the body are probably the most important of all. In ten cases under the author's observation the weight almost invariably fell during the first week, and rose steadily during the second, third, and fourth weeks, the greatest gain in twenty-eight days being eight pounds naked weight. The appetite and strength improved steadily during the process, and the subject was able to sleep and work well.

Dr. Playfair (*Brit. Med. Journ.*, *loc. cit.*) in discussing Dr. Eccles' paper, which was read at a meeting of the Royal Medical and Chirurgical Society, said that under massage, combined with isolation, rest, and overfeeding, he was accustomed to see an increase of ten or twelve pounds a week, and many patients ultimately doubled their weight. He mentioned the case of a lady, nearly moribund, suffering from a hectic temperature and profuse night-sweats, her right lung being riddled with cavities, who, on being subjected to this treatment, rapidly improved, and gained six stones in two months and a half, although Dr. Douglas Powell, who had examined the case before and after the treatment, subsequently stated that the patient was still suffering from phthisis.

Dr. Rubens-Hirschberg (*Bulletin Gén. de Thérap.*, p. 241, Sept. 30, 1887) has made observations on the effects of massage of the abdomen in certain diseases of the stomach. He applies massage to the muscles of the abdominal walls and to the organs in the cavity. He finds that in dilated stomach and enfeebled conditions of the abdominal walls the manipulations increase the energy and number of the contractions of the stomach during digestion, and thus enables the organ to empty itself of its contents in a comparatively short time. The larger flow of blood to the organ improves the quality and increases the quantity of the gastric juices, and the improved nutrition of the organ itself allays

the feelings of weight and burning and the pains which accompany feeble digestion, these abnormal sensations being replaced by a feeling of well-being and comfort. A peculiar effect of abdominal massage is to increase the quantity of urine passed. This diuresis begins promptly at the first sitting, persists during the continuance of the treatment, and only disappears by degrees after its cessation.

### **3. Manipulations in spastic paralysis.**

**Dr. Weir Mitchell** (*Philadelphia Medical News*, July 23, 1887), arguing from various physiological data, came to the conclusion that the exaggerated excitability of muscles met with in spastic paralysis might be permanently lessened by forcible extension of the affected muscles. This hypothesis he proceeded to test practically, and he now asserts that beyond all doubt strong and frequent extension is of use in all cases of hyper-excitable muscles, but that it answers best in the typical spastic palsies of childhood, and in such other forms as are pathologically non-progressive. This proceeding does not, of course, cure such cases, but it increases the power of the patient in moving the affected limbs, and adds to his comfort in locomotion. The patient is subjected twice a day to the treatment, which consists in placing each of the affected muscles, over and over again, in a condition of extreme extensions, by a series of manipulations which are easily taught to a strong nurse. Placing the patient on his back, after being undressed, the nurse takes the foot in her lap and moves each toe in flexion and in extension, steadily and to the limit of endurance, and then slowly lets it go back to rest. The ankle is next slowly flexed with the knee in extension; then the knee is strongly flexed and the foot carried firmly into prolonged extension; lateral motions follow. The leg is then slowly and strongly flexed, the patient being on his face and the thigh in extension; and now, the patient being still prone, the nurse puts a hand on the buttocks and pulls the thigh back, or sits on the buttock and gently pulls the leg up from the bed so as stretch the quadriceps. The anterior muscles of the thigh may also be stretched by putting the patient on his back half off the bed, with a pillow under the pelvis, and pushing the leg downwards. The lateral motions to stretch the abductors are managed best by two nurses, but it is easy to effect them by the nurse sitting on the bed between the limbs, and by the use of both hands forcing a leg into a position of abduction, while the other leg is steadied by the body of the operator. The posterior muscles of the thigh are easily stretched by lifting the whole limb while the leg is in extension on the thigh. The author lays great stress on the precaution of making all



movements with great firmness, and with deliberate slowness, so as not to arouse resistance; and he states that with a continuance of the treatment the movements may be repeated more frequently than at the first, when the pain is somewhat annoying. Dr. Mitchell claims that under this treatment the hardness of the muscles lessens, the tissues get softer, the limb perspires more freely and gets warmer, the gait improves, and even the general condition is often ameliorated in a surprising degree. After some weeks of this treatment a limit is reached beyond which no improvement takes place, and then Dr. Mitchell is willing to use section of tendons freely. After the wounds heal, he returns for a few weeks to the extensions, and then trains the patient to imitate them.

#### **4. Salicylates in neuralgia.**

Dr. Francis X. Dercum (*Philadelphia Med. Times*, p. 471, April 16, 1887) reports the case of a married lady, aged fifty-two years, who had suffered for about twelve years from nearly continuous facial neuralgia, implicating chiefly the superior maxillary and, to a less degree, the inferior maxillary nerve also. The patient was the mother of several healthy children, and with the exception of the pain was otherwise in good health. The description given of the symptoms shows that the case was one of unusual severity, and no relief had ever been obtained by the various forms of treatment to which she was subjected, including extraction of nearly all the teeth on the affected side. The patient attributed the first onset of the attack to exposure to cold, and it was elicited that in the entire period of twelve years she had only had but one complete remission, and this occurred in the course of an attack of severe rheumatism, that affected the lower extremities, and which lasted eight weeks. The obscure connection with rheumatism revealed in the history of the case led the author, before resorting to nerve stretching, to prescribe oil of gaultheria, in 15 minim doses, every three hours. In four days there was decided improvement, but the use of the oil was soon abandoned, owing to an attack of diarrhoea which supervened, and the patient being exposed to a fresh chill, the pain returned. The oil was now replaced by salicylate of sodium, in doses of 20 grains every four hours, which the patient voluntarily increased to 30 grains. The pain did not return, but nevertheless the patient persisted for a period of seventeen days in taking these large doses of the drug, even although it caused great depression with excessive tinnitus and marked weakness of the pulse. On the medicine being finally abandoned there was no return of the pain, and the patient was afterwards repeatedly exposed to bad

weather without having a recurrence of the neuralgia. Dr. Dercum believes that the pain was arrested by the direct action of the salicylates, and that the good effect of the drug was due to the large doses taken.

### **5. Cannabis indica in continuous headache.**

Dr. Stephen Mackenzie (*Brit. Med. Journ.*, Jan. 15, 1887) directs attention to the value of Indian hemp in the treatment of a certain kind of headache. The headache is of a dull, continuous or sub-continuous character, and although it is sometimes attended by paroxysmal exacerbations, yet it is especially characterised by its constancy. Patients rise with it, are troubled with it all day, carry it to bed with them, and find it present on awaking at night. The pain may be frontal, temporal, occipital, or, more rarely, vertical, but it is usually diffused. The pain is not usually unilateral, the ocular phenomena of migraine are generally absent, and there is no local tenderness or soreness; the attack is not attended by vomiting, although there may be nausea. Dr. Mackenzie begins with  $\frac{1}{3}$  gr. or often  $\frac{1}{2}$  gr. of the extract night and morning, or occasionally three times a day. If at the end of a week some amelioration of the headache has been procured, he advises its continued use in the same doses, but if there be little or no improvement, he increases the dose to 1 gr. at night and  $\frac{1}{2}$  gr. in the morning, and if this prove insufficient, he gives 1 gr. night and morning; this failing, he increases the dose by  $\frac{1}{2}$  gr. until 2 grs. at night and  $1\frac{1}{2}$  gr. in the morning are reached. As a rule, no inconvenience is experienced by the patients from the use of the drug beyond a feeling of slight confusion or giddiness. As the pain becomes less urgent the dose should be gradually diminished, but it is advisable to continue the remedy for a week or two after the headache has disappeared; treatment has to be continued in ordinary cases over several weeks, and in rebellious cases for two or three months. The Indian hemp may be given alone, or in combination with compound glycyrrhiza powder, powdered valerian, or extract of gentian. When constipation is present, aloes and myrrh pill or compound rhubarb pill in small doses may be added to the cannabis indica, and where flatulence is troublesome the extract may be combined with compound assafoetida pill, carbolic acid, or quinine, either separately or combined.

### **6. The treatment of hemicrania by bromide of potassium.**

MM. Gilles de la Tourette et P. Blocq (*Le Progrès Médical*, June 11, 1887) publish the full history of a severe case of migraine under the treatment of Prof. Charcot. The patient was a railway



porter, aged thirty years, and the son of a man who died of locomotor ataxia. He began to suffer from attacks of migraine when fourteen years of age, but it presented no peculiarity until four years later, when his friends noticed a difficulty in his speech following the attack. At a still later period he saw a bright cross before his eyes, had hemiopia, numbness in the right hand, and during the attack could neither read nor write. One attack is minutely described as a type of the others; it ended by severe vomiting, after which the patient dropped off to sleep at two a.m., eight hours after the hemiopia had begun. For treatment Charcot ordered 30 grains of bromide of potassium a day for the first week, 45 for the second, 60 for the third, and 75 grs. for the fourth; and then ordered the patient to begin again and go through this ascending scale. The treatment was continued for a year, and during this time the patient had only one recurrence of the attack, and in a much milder form than previously, and two years after the cessation of the treatment, the patient, who had been frequently seen in the meantime, reported himself free from every sign of the disease. Charcot believes that all cases of migraine which begin by visual disturbances and are accompanied by transitory aphasia and tingling or numbness of one side ought to be treated by large doses of bromide of potassium.

#### **7. Antipyrin and antifibrin as anodynes.**

Prof. Germain Sée (*Revue de Thérap.*, May 22, 1887) believes that antipyrin is less important as an antipyretic than for its power of reducing pain. He has found it useful in allaying pain in cases of chronic rheumatism, gout, and arthritis without fever, and in which the salicylate of soda had failed to bring relief. It is, however, in the treatment of nervous pain that its power is most strikingly exemplified. Chronic and intractable cases of facial neuralgia have been cured by it, and out of six cases of long standing migraine five were cured in two hours by 30 grains of the drug. Relief has been afforded by the use of antipyrin in herpes zoster, sciatica, and lumbago, as well as in the pains of locomotor ataxia, and of aortic aneurism and aortic regurgitation. As there is nothing common to these diseases but the symptom of pain, so the author concludes that antipyrin should take high rank as an anodyne. It must, however, be given in doses varying from 50 to 100 grains, or, still better, in 15 grains, repeated every hour or two hours in a glassful of iced water. Nausea, vomiting, or vertigo is occasionally caused, and then the dose ought to be lessened. Under the prolonged use of the drug a cutaneous rash, like that of urticaria, or of scarlet fever, sometimes appears, but it soon subsides on the dose being diminished or the medicine dis-



continued. The author speaks highly of the use of antipyrin in combination with bromide of potassium in the treatment of epilepsy, and he found it especially useful in those cases in which it is desirable to diminish the dose of the bromide.

**Dr. Suckling**, of Birmingham (*Brit. Med. Journ.*, p. 1,273, June 11, 1887), corroborates the statement of Sée, viz., that the pains of locomotor ataxia are alleviated by antipyrin. In three cases of this disease, in all of which the pains were particularly severe, the administration of the drug was followed by relief to the pains. In the case of a man, aged forty-eight years, in an advanced stage of the disease, and suffering severely from the shooting pains, antipyrin was given in powders of 10 grains each, one to be taken in water when the pains came on. The pains ceased when two powders were taken, and on the recurrence of the next paroxysm, a week later, they were checked by another powder, and soon the patient declared himself better than he had been the previous twelve months.

**Ungar** (*Centralbl. f. die gesammte Therapie.*, Jan., 1887) found that antipyrin in doses of from 15 to 20 grains frequently cut short an attack of hemicrania. In some cases it sufficed to completely prevent an attack when administered on the onset of the premonitory symptoms. In a few cases the symptoms were alleviated when it was administered during the height of the paroxysm. In other cases it was found without any influence on the attack; in rare cases the relief afforded in one attack was not experienced in subsequent ones.

**Dr. John Ogilvy** (*Brit. Med. Journ.*, p. 123, July 16, 1887), who is himself a sufferer from "bilious headache" (hemicrania), has found more relief from antipyrin than from tea, caffeine, guarana, the bromides, emetics, purgatives, and the other usual remedies recommended in the treatment of the disease. He recommends that 8 grains be taken at the outset of the premonitory symptoms, the patient lying down in a quiet and darkened room and resigning himself to rest. Another dose of 8 grains is to be taken at the end of an hour, and it may be that a third and fourth are required, but generally sleep, or a pleasant languor, follows the first or second dose, accompanied by gradual relief from headache. No unpleasant after-effects are felt, and the appetite returns at once.

**Lépine** (*Centralbl. f. die gesammte Therapie.*, Jan., 1887) found that the lancinating pains of locomotor ataxia are quickly allayed by one or two doses of antifibrin, 8 grains being given for a dose. He also found it useful in the trembling of sclerosis, in patches, and in epilepsy.

### 8. Refrigeration in locomotor ataxia.

**Dr. Raison** (*Thèse de Paris*, 1886; *Bull. Gén. de Thérap.*, Oct. 15, 1886) concludes, from eleven cases treated by him, that the pains in the crises of locomotor are greatly alleviated by the use of the method of refrigeration. The spray of ether or of methyl chloride affords great relief when the pain comes on, the application being made to the seat of the pain rather than over the vertebral column. The author acknowledges that the spray of methyl chloride acts very quickly, but on the whole it is less convenient of application, and more liable to produce superficial sloughing of the skin than the ether spray.

**Dr. George W. Jacoby**, of New York (*Philadelphia News*, Aug. 20, 1887), also speaks favourably of the action of chloride of methyl spray in the treatment of neuralgia. He has treated five cases of trigeminal neuralgia by the spray, and in all the pain was entirely relieved by one application. In two the pain returned, but cure was effected by a second application. In a third case, the pain was so much ameliorated by four applications that the patient discontinued treatment, although not quite well; and in another case relief only was obtained by six applications, but not a permanent improvement.

### 9. Local analgesics.

(a.) *Drumine*.—**Dr. John Reid** (*Australasian Med. Gazette*, Oct., 1886; and *Brit. Med. Journ.*, March 26, 1887) has obtained an alkaloid which he calls *drumine*, from the *Euphorbium Drummondii*. This alkaloid is said to be a powerful local anæsthetic, like cocaine. Unlike cocaine, however, which acts on both the sensory and motor nerves, and causes a primary excitement, drumine acts almost entirely on the sensory nerves, and does not cause primary excitement; it has no action on the pupil, and its administration is attended by little or no risk. Fresh solutions should always be used, as a fungus grows when the solution is kept for a few days. The author believes that this drug will be found useful in nerve troubles of a painful character not due to a constantly exciting cause, such as operations, irritation, œdema, sprains, and such-like. He also used it successfully in nasal catarrh, spasmodic contractions of the anus, facial dermatitis with acne and itching, sciatica or lumbago, periosteal pain after fracture, and other painful diseases.

**Prof. Ogston** (*Brit. Med. Journ.*, Feb. 26, 1887) experimented with a specimen of drumine sent to him by Dr. Reid, and found it valueless as a local anæsthetic; but it is probable that the drug may have undergone decomposition. Dr. Reid's brother, indeed, writes that "the sample sent was stale through exposure."

(b.) *Stenocarpine*.—Dr. J. Herbert Caliborne, jun., of New York (*New York Med. Record*, July 30 and Aug. 13, 1887), came to the conclusion, from experiments on animals, that stenocarpine possessed local anæsthetic and mydriatic properties, and applied it to man. Three drops of a 2 per cent. solution of the alkaloid were placed in the left eye of a medical friend. He complained at first of a stinging sensation and slight lacrymation, but in five minutes anæsthesia of the cornea and conjunctiva was complete. There were slight signs of returning sensibility in twenty, and sensation was normal in thirty minutes. The alkaloid was also found to be a powerful mydriatic. The author concludes that in its effects on the eye it appears to stand midway between atropine and cocaine, and to be indicated wherever cocaine is desired for its anæsthetic and atropine for its mydriatic properties.

The alkaloid was afterwards used successfully for the extraction without pain of foreign bodies from the cornea, and in the treatment of conjunctivitis, while its effects on the nose, ear, and skin were likewise tested with satisfactory results.

### 10. Hypnotics.

(a.) *Methylal*.—MM. Muriel and Combemale (*Le Progrès Médical*, July 2, 1887) have made a series of observations in order to determine the therapeutic value of methylal, the general results of which are that in some of the milder cases of mania, and in many chronic cases of general paralysis and dementia, the drug proves a useful hypnotic for five or six days, but that the patient soon gets accustomed to it. It was given in doses of from 15 grains up to a drachm and a half without producing any inconvenient after-effects. Its sweet taste and agreeable odour make it pleasant to the patient, but the price is at present too high for it to become much employed, especially as it does not appear to possess well marked compensating advantages over other drugs of the same class.

(b.) *Urethane*.—Dr. J. B. Andrews (*American Journal of Insanity*, Oct., 1886) records several cases of mania, dementia, and general paralysis, in the associated sleeplessness of which urethane proved a useful hypnotic. He generally gave a dose of 30 grains, but in two cases 60 grains were given. In no case was any unpleasant symptom caused, although the author acknowledges that other observers mention nausea as having been caused by large doses of the drug.

(c.) *Hyoscine hydrobromate, and hyoscyamine*.—Dr. Henry Wetherill, jun. (*Journal of Nervous and Mental Diseases*, Feb., 1887), has made observations on the comparative value of hydrobromate of hyoscine and hyoscyamine as hypnotics in the treat-



ment of the insomnia of the insane, Merck's preparations being used. The patients treated were first proved by objective observation to be the subjects of habitual sleeplessness, and during the period of treatment—three weeks—a single dose of the drug selected for trial was administered by mouth at 9 p.m. Each of the ten cases, mostly chronic lunatics, which comprised the first group, was treated with a dose, varying from  $\frac{1}{100}$  to  $\frac{1}{240}$  of a grain, of hyoscine hydrobromate, and quiet sleep for a period varying from five hours to all night was almost invariably produced. The second group consisted of seven cases—six of chronic and one of subacute insanity—and each was treated by a dose varying from  $\frac{1}{12}$  to  $\frac{1}{60}$  of a grain of hyoscyamine. The results obtained with this drug were not nearly so satisfactory as with hyoscine hydrobromate. The sleep obtained varied from none at all or a few short snatches to all night, and there was a preponderance in favour of short periods of sleep. In the third group, which consisted of ten cases of chronic insanity, the patients were violent, destructive, and accustomed to the usual modes of medication. All of them were treated with a nightly dose of hyoscine hydrobromate, and with highly satisfactory results. Dr. Wetherill asserts that “the excited wards have entirely changed in character for the better since the introduction of hyoscine,” thus confirming the favourable opinion of the action of the drug as a hypnotic and sedative expressed by Dr. Mitchell Bruce and mentioned by the writer last year.

# DISEASES OF THE STOMACH, INTESTINES, LIVER, ETC.

BY SIR DYCE DUCKWORTH, M.D., F.R.C.P.,

*Physician to, and Lecturer on Clinical Medicine at, St. Bartholomew's Hospital,*

AND

ROBERT MAGUIRE, M.D., M.R.C.P.,

*Physician to Out-Patients, and Joint Lecturer on Pathology, at St. Mary's Hospital.*

---

## 1. Dilatation of stomach.

Mathieu (*Le Progrès Medical*, Feb. 12, 1887), following Germain Sée, shows that dilatation of the stomach is often found in connection with nervous dyspepsia. It is well known that neurasthenic patients are subject to fits of alternate elevation and depression, but the depression is the more lasting. Now in such patients dyspepsia appears as the result of strong emotion, and Mathieu believes that pain in the stomach and gaseous distention of the stomach and intestine, which occur alternately in this form of dyspepsia, are due to alternate contraction and relaxation respectively of the stomach muscles. The relaxation, like the depression of spirits, is the more lasting, and leads finally to dilatation. The symptoms, however, must not be supposed to be produced by the stomach condition only, for no doubt the intestine plays a part in their production.

The condition may be treated as follows :

1. The stomach should not be overloaded. Vegetables, green fruits, and starchy foods are to be avoided. Warm drinks are beneficial.

2. The bowels must be regulated by a mixture of magnesia, sulphur, and cream of tartar.

3. Cold douching and the shower-bath will help to restore tone to the system.

4. Digitalis, Calabar bean, and nux vomica will help to restore tone to the stomach ; but the best drug is ipecacuanha in a three-quarter-grain dose in the morning every two or three days. Vomiting is rarely caused by this treatment.

5. The stomach symptoms may be relieved by warm drinks, chloroform water, or cocaine.

[It is probable that treatment by nux vomica alone will suffice. The evidence in favour of the other drugs mentioned is not convincing.—D. D.]

**Sievers** and **Ewald** (*Therap. Monatsheft*, August, 1887) have endeavoured to discover the length of time during which food remains in the stomach by means of salol, a double ether of phenol and salicylic acid. By experiments on man they found that this agent is not split up into its components in the stomach, owing to the acid re-action of that organ, but that the change takes place in the intestine. The alkaline secretions there existing allow of such decomposition, quite independently of the presence of pancreatic juice ; salicylic acid is set free, and is in a short time discoverable in the urine. As a result of numerous experiments upon persons not suffering from any disorder of the stomach, the conclusion is arrived at that when salol is introduced into the stomach, salicylic acid does not appear in the urine before half an hour, and not later than one hour, after the administration. If salol be introduced into the intestine directly, twenty to thirty minutes suffice for its decomposition. The authors therefore conclude that the stay in the stomach may be taken as the difference of these two records, being usually about a quarter of an hour, and that in healthy individuals it ought not to exceed one hour. In cases of dilatation of the stomach, the salicylic acid did not appear in the urine until after two or three hours ; and in two cases the diagnosis of dilatation was determined upon this fact. The diagnosis was afterwards confirmed by distending the stomach with carbonic-acid gas. It appeared, however, that the same delay in decomposition of salol occurs sometimes in acute catarrh of the stomach. The observers point out that it would be of interest to study by means of salol the effect of various therapeutic remedies calculated to improve the muscular action of the stomach. They have found the re-action appear fifteen minutes earlier when electricity had been applied to the stomach, both in healthy individuals and in those suffering from gastrectasis. Massage might similarly have its effects controlled. In order to detect the salicylic acid re-action in the urine early, it was found necessary to acidulate the urine with hydrochloric acid, shake with ether, and then test the ethereal extract with perchloride of iron.



## 2. Milk as a food and remedy.

Reichmann (*Brit. Med. Journ.*, Feb. 12, 1887) has recently made several experiments on the digestion of milk in the human stomach. The subject was a young man, aged twenty-two, in robust health. The experiments were made by means of the stomach-pump with unboiled, as well as alkaline and boiled, milk. The results were as follows:—300 cbc. of unboiled milk are evacuated by a healthy stomach in four hours from the time it has been taken, although the regular digestion is completed three hours afterwards. Coagulation of the milk takes place about five minutes after ingestion, and does not depend on increase in the quantity of acid, but on another agency, possibly the fermentation of the rennet. During the digestion of 300 cbc. of milk, the contents of the stomach show the greatest average degree of acidity at the end of an hour and a half. This acidity is owing, when digestion begins, to the presence of lactic and hydrochloric acids; the latter appears only three-quarters of an hour after the ingestion of milk. Half an hour after taking the milk the quantity of peptones is increased, and remains so for an hour and a half, after which time it becomes perceptibly less. Boiled milk (heated at from  $16^{\circ}$  to  $26^{\circ}$  C.) was taken into the stomach, 300 cubic centimetres were digested in two hours and a half, and the acid contents of the stomach disappeared in three hours. After the ingestion of boiled milk, peptonisation, which in that case is more energetic, begins sooner, and the clots and caseine are not so thick as when unboiled milk is given. Experiments with alkalisied milk have shown that alkalisiation of milk prevents the peptonising action of gastric juice; 200 cbc. of milk alkalisied with bicarbonate of soda leave the stomach entirely at the end of two hours. Alkalisiation does not prevent milk in the stomach from coagulating under the influence of rennet.

Debove (*Gaz. Hebdom.*, No. 47, 1886) shows that large quantities of milk, when used continuously, are apt by their volume to produce dilatation of the stomach. In cases that have suffered in this manner, the author says that he has been able to reduce the stomach to its normal size by washing it out and diminishing the quantity of milk taken.

[Milk is not well borne when given in large quantities at a time. Physiologically it is taken in sips, and gradually introduced into the stomach, to be acted upon slowly. Large clots of curd are naturally found if it be imbibed by ounces, and distressing pain may follow on this. It is best to dilute the milk with lime water to one-third or one-fourth, or to give rusks with it, so as to delay the formation of masses of curd. In very irritable

states of stomach, only teaspoonfuls can be tolerated at intervals of a quarter of an hour, and this quantity is best given diluted with lime water. Skimmed milk is better digested when large quantities have to be given.—D. D.]

### 3. Duration of digestion.

Petersen, of St. Petersburg (quoted in *Birmingham Medical Review*, p. 139, March, 1887), has endeavoured to investigate accurately the action of various substances upon the duration of artificial digestion. He employed an artificial gastric juice, composed of one gramme of pepsin in a litre of water, with ten grammes of hydrochloric acid. Of this solution 450 cbc. were taken, and to it added 20 to 40 grammes of dried albumen, the time of digestion being noted. Alcohol in the proportion of five per cent. did not hinder digestion, but ten per cent. stopped the process, the intermediate percentages retarding the digestive action. Antipyrin exercised no influence if two to two and a half grammes were added, though larger quantities retarded the action. One or two grammes of bromide or iodide of potassium had but little effect, organic preparations of iron had hardly any influence, but reduced iron and the inorganic salts slowed the action. Magnesium and sodium sulphates, even in moderate doses, had the same effect. A gramme dose of chloral hydrate had no slowing effect, but one gramme and a half caused marked retardation. Chloride of sodium, even in large quantities, did not retard digestion.

Glazinski (*Deutsch. Arch. f. klin. Med.*, vol. xxxix., p. 423; *Fortschritte d. Med.*, p. 23, 1887) caused a number of sick and healthy persons to swallow coagulated egg-albumen with and without the addition of alcohol, and after a certain interval he aspirated the contents of the stomach and examined them chemically to ascertain the exact stage to which digestion had arrived. He found that alcohol rapidly disappeared from the stomach, no aldehyde was to be found, and most probably the alcohol entered the circulation unchanged. On the whole, in health alcohol favoured digestion. A first stage was observed in which the digestion of albuminates was hindered. This stage lasts only as long as alcohol remains in the stomach, which is only a short time; 100 cbc. of a 25 per cent. solution of alcohol disappeared in fifteen minutes. In a second stage digestion is very rapid, and soon compensates for the slowing of the first stage. Secretion of acid even persists after removal of all albumens from the stomach. It would appear, therefore, that small quantities of alcohol favour digestion in health. In diseased states, however,

the important second stage did not occur, and hence alcohol should be harmful when the stomach is not acting properly.

#### **4. Influence of beverages on digestion.**

Dr. Fraser (*Journ. of Anat. and Phys.*, April, 1887) gives the following as the results of his observations:—

1. The digestion of most albuminoid matters is, in most cases, retarded by infused beverages, but their absorption is rendered more rapid. The digestion of starchy food, however, is assisted by tea and coffee; gluten has its digestion but little retarded by tea and cocoa, more by coffee; and, therefore, bread should be eaten with tea and cocoa. Meats, on the other hand, and especially eggs and salt meat, show little retardation of their digestion by coffee.

2. Eggs are the best form of animal food to be taken with infused beverages, and are best lightly-boiled if eaten with tea, hard-boiled if with coffee or cocoa.

3. The caseine of the milk and cream taken with the beverages is probably absorbed in a large degree from the stomach.

4. The butter used with bread is digested more slowly in the presence of tea, more quickly with coffee or cocoa.

5. Coffee and cocoa not only disguise the taste of cod-liver oil but assist its digestion.

#### **5. Neurotic dyspepsia.**

A form of this disorder has been studied and closely examined by Reichmann (*Berlin klin. Woch.*, Nos. 12 to 15, 1887) with the result that he finds the symptoms to be mainly due to a hypersecretion from the gastric mucous membrane of not merely hydrochloric acid, as in acid dyspepsia, but also of pepsine. In fact, a large quantity of gastric juice is poured out in the absence of food or of any other apparent source of irritation. The subjects of the affection are usually young or below middle age, nearly always neurotic in temperament, and present other obvious affections of the nervous system, such as hysteria, neurasthenia, or even tabes. Periodically, and often in the night, the patient is attacked by pain in the stomach, thirst, heartburn, headache, restlessness, etc., which symptoms are followed by copious vomiting. The vomiting shows also a tendency to occur in the morning. The vomit consists of pure gastric juice, unmixed with food, and of an acidity of 0.08 to 0.4 per cent. Even if all food be removed from the stomach by washing it out at night time, in the morning a quantity of gastric juice may again be removed from it, if indeed no paroxysmal attack has occurred in the night. The ordinary signs of neurotic dyspepsia are present, such as increased appetite, craving hunger, thirst, heartburn, pain, etc.,



while ordinary digestion is accompanied by acidity and rapid disappearance of meat-fibre from the stomach. In time emaciation and anæmia result.

The disease is rare, but not new. Perhaps, too, it is rare because the examination of the gastric juice and vomit necessary to establish the diagnosis has not been made sufficiently often. Probably many cases of neurotic dyspepsia would be found to belong to this type if sufficiently investigated.

The treatment recommended by Reichmann consists in washing out the stomach (this seems to be in Germany an accepted panacea for dyspepsia) and removing the acid contents, replacing them by alkaline solutions. The local action of nitrate of silver on the stomach is beneficial, either in the form of a wash of 1 to 2 parts in 1,000 of water or  $\frac{1}{2}$  to  $1\frac{1}{2}$  grains dissolved in 10 drops of water and encapsuled in gelatine. Alkalis may be taken to relieve the immediate symptoms, and alkaline waters taken in the morning, fasting, are useful. The diet should be dry, and consist of albuminous matters as much as possible, so as to make use of the excessive amount of gastric juice. Thirst, which will necessarily result from the diet as well as the disease, may be relieved by injections of water per rectum.

[This plan of treatment is very laborious, and would not be tolerated by English patients.—D. D.]

#### **6. Ulcer of the stomach.**

The pathology of this affection is still obscure, and, in consequence, our treatment of it remains empiric. Riegel (*Deutsch. med. Wochenschr.*, Dec. 30, 1886), from a former examination of the contents of the stomach in gastric ulcer, concluded that there was no constant hyperacidity, as had been often supposed. Van der Velden, however, came to an opposite conclusion, and now Riegel, from further (272) examinations in 31 cases, concludes that the proportion of acid in the gastric juice, varying as it does at different times, is always higher than normal. Care was taken to obtain typical cases, and in twelve the diagnosis was rendered certain by the occurrence of hæmatemesis. The excessive acidity was due to the presence of hydrochloric acid, and not to fermentative changes; and, moreover, only occurred on taking food. Riegel believes that it is this hyperacidity which is an indication of irritation of the gastric mucous membrane. In such a condition any slight erosion may lead to an ulcer, which will be prevented from healing by the excessive acidity.

On the basis of such a pathology it is obvious that astringents are out of place in the treatment of gastric ulcer, and that we should rather strive to diminish the excessive acidity. Riegel

recommends alkaline saline waters, but especially those of Carlsbad, not merely in the morning, but several times during the day, especially when, after meals, hyperacidity is most marked. Again, too, is the stomach to be washed out, so as to get rid of the excess of acid and the remains of food, leaving the ulcer free from all irritation.

[But what of the risks of this meddlesomeness?—D. D.]

### **7. Death following shortly upon washing out a dilated stomach.**

Marten (*Lancet*, vol. i., p. 74, 1887) brings forward a case which may warn observers that washing out the stomach, which is now so extensively and indiscriminately practised, especially in Germany, is not always the simple and innocuous operation generally described. The case recorded was one of stricture of the pylorus, probably due to a cicatrix from an old ulcer. There was dilatation of the organ, attended with pain, vomiting, flatulence, and general malnutrition. It was decided to wash out the stomach, and a tube was passed for that purpose; but shortly afterwards the patient felt very faint, and the tube had to be withdrawn. Two hours later stiffness in the jaws and rigidity of the arms appeared, and passed quickly into a condition of general rigidity, the temperature rising to  $103^{\circ}\cdot4$ , consciousness remaining intact. Death occurred apparently from spasm of the diaphragm, the temperature rising just previously to  $107^{\circ}\cdot2$ , six and a half hours after the manipulation. At the autopsy no injury to the stomach could be found, and the diagnosis formed during life was verified. The other organs were perfectly healthy.

### **8. Vomiting.**

Atkinson (*Practitioner*, vol. ii., p. 357, 1886) discusses the treatment of various forms of vomiting. For bilious vomiting he recommends 15 minims of solution of potash and 4 minims of laudanum every four hours. The potash, he believes, acts as a sedative to the stomach and a stimulant to biliary secretion. For the vomiting of pregnancy, light meals at various intervals throughout the day, whenever there is a feeling of emptiness, are recommended. In the vomiting accompanying ulcer of the stomach, small quantities of peptonised milk or koumiss should be given at intervals; the body should be oiled night and morning, and well clothed. The diet should be gradually increased when pain has subsided. In the way of drugs, tartrate of iron, cocaine, glycerine, and infusion of calumba are best. If the vomiting be urgent, then peptonised meat enemata are advisable.

[A warm bed is probably better than oil-inunctions and liberal clothing. Rest is the main treatment for gastric ulcer.—D. D.]

### 9. Gastralgia.

Sir James Sawyer (*Lancet*, Aug. 13, 1887) gives a pill of one-twenty-fourth grain of arsenious acid and two grains of extract of gentian in cases of uncomplicated gastralgia. It is to be given three times daily, between meals, and at the same time other pathological conditions which may be present must be appropriately treated. In severe cases, blisters, cauterisation, or stimulant liniments may be necessary, and the diet should be generous if there be no gastric catarrh.

### 10. Condurango bark in cancer of the stomach.

This medicament was mentioned in the "Year-Book" for 1886 as having been recommended first by Friedreich in cancer of the stomach, and more recently by Wilhelmy for various other stomach disorders.

Riess (*Therapeut. Monatsheft*, April, 1887) adds further and extraordinary testimony to its powers. In several cases of undoubted cancer of the stomach the condurango bark was found useful. The appetite was increased, the nausea and vomiting were relieved, pain disappeared, and the patients gained strength and put on flesh, while the life was prolonged. It is reported that the visible tumour diminished in size in seventeen cases out of sixty-four, and *disappeared altogether in eight cases*: an increase in its size during the treatment was never noticed. Ten grammes of the bark were given daily for months together, and the following prescription is recommended:—

R	Decoc. Cortic. Condurango	...	180·00 parts
	Syrup. Cortic. Aurantii	...	20·00 „
			<hr/>
			200·00

One-tenth of this to be taken daily.

[Supposed cancerous tumours of the stomach do occasionally disappear under treatment. I have seen two such results from the use of carbolic acid. In both cases the diagnosis seemed certain, but was most assuredly wrong.—R. M.]

### 11. Hepatic phlebotomy.

Dr. George Harley (*Brit. Med. Journ.*, vol. ii., p. 899, 1886) introduced a discussion upon the subject of the surgery of the liver at the annual meeting of the British Medical Association. Dr. Harley had been led to suggest the withdrawal of blood directly from the liver by a consideration that the ordinary methods of blood-letting in the neighbourhood of the liver must act more particularly on the general systemic circulation than locally on that of the liver. Moreover, he had repeatedly, in the



way of experiment, tapped the livers of animals for the purpose of drawing blood, without in the least injuring the animal. In fact, the post-mortem examinations in such cases revealed no extravasation into the peritoneal cavity, and hardly any injury to the liver capsule. Dr. Harley further insists that there is no danger of introducing air into the veins if the convex surface of the liver be tapped, and if a cannula of the size of a No. 2 or 3 English catheter be employed. Dr. Harley described a case of hepatitis in which he had recommended the operation. A woman, aged 38, of intemperate habits, had great ascites and anasarca of the lower limbs. Paracentesis and aperients had produced no effect, and the case had become desperate. Insensibility being produced, the liver was pierced from right to left by a trocar of the size mentioned and eight inches in length. The instrument was introduced into the liver to its full length. Twenty ounces of blood flowed from the open end of the cannula with no deleterious, but rather a salutary, effect. From that time the liver became reduced in size, and under the influence of tapping, and the administration of resin of copaiba, the ascites and anasarca disappeared, and in two months the patient was able to walk about.

In the discussion which followed, **Dr. Boyes Smith**, of Netley, asserted that the operation recommended by Dr. Harley was a very old one in China and India, and a vast number of cases had been similarly treated at Netley. He, however, doubted whether the operation was justifiable in all cases, and thought that Dr. Harley's views, based as they were on one case only, were somewhat too hasty. He himself recollected a case in which five ounces of blood were removed from the liver, and, as the patient then died within a few hours, he could not consider the operation devoid of danger.

**Mr. Willett** accentuated the latter remark by relating a case in which he performed aspiration upon a doubtful tumour of the liver, which afterwards proved to be malignant. The patient died two minutes after the introduction of an ordinary-sized needle, apparently from shock, since it was shown post-mortem that no large vein had been pricked and no hæmorrhage had taken place.

Other speakers thought that equally good results might be obtained from the use of leeches and other remedies.

**Dr. Harley** (*Brit. Med. Journ.*, vol. i., p. 98, 1887), in reply, maintained that his operation was essentially different from the Chinese and Indian procedure. He insisted that great care should be taken to make a correct diagnosis before operating, for

cancerous, fatty, or amyloid degenerations of the organ were not eligible for operation.

It may be noted that an American writer, Kelly (*The Medical News*, June 4, 1887), has suggested a modification of Dr. Harley's treatment, which, however, he has never carried out, and which is even bolder than that of Dr. Harley. He believes it advisable to make a small incision into the abdomen, so exposing the liver, and then to abstract blood from the organ by a trochar or by transfixing a lobe.

### **12. Puncturing the liver capsule.**

This is another operation which Dr. Harley performs, with the object of relieving tension of the liver substance. Such a condition he believes to be the cause of many of the symptoms complained of by patients who have congestive, and especially chronic, indurative affections of the liver. With a trochar having the calibre of a No. 2 to a No. 6 English catheter, three to six punctures are made into different parts of the anterior of the liver. The trochars are withdrawn, and the cannulæ allowed to remain *in situ* for a minute or two to allow of the escape of any liquid which may exude. Each puncture is finally covered with a piece of diachylon plaster, and a broad bandage rolled round the abdomen. Dr. Harley relates three cases which, he asserts, were greatly benefited by the procedure.

[The treatment suggested in the foregoing paragraphs demands great consideration before being generally practised or applied to even any one individual case. It is admittedly recommended upon the results of an extremely small number of cases, and the warnings of Dr. Boyes Smith and Mr. Willett should have great weight.—R. M.]

### **13. Intestinal irrigation in catarrhal icterus.**

This method of treatment, which was mentioned in the "Year-Book" for 1886, has been further investigated by Löwenthal (*Medicin-Chirurgische Rundschau*, Dec., 1886), in forty-one cases, and he also reports good results.

Krause also (*Archiv f. Kinderheilk*, 1886) has tried the method in nineteen cases, the ages of the patients ranging from nine to sixteen years. The jaundice and gastro-duodenal symptoms in slight cases were found to recede more quickly under this treatment than under the more usual forms of internal therapeutics. In severe cases, on the other hand, the subjective symptoms alone were modified. The quantity of water to be used varies with the age of the patient, and should not exceed two litres, nor be less than one litre. The temperature should be about 66° F.; a lower temperature is not well borne. Diarrhœa is no

counter-indication. From four to five injections, it is said, usually suffice for a cure.

#### 14. Coto bark in diarrhœa.

Houchard (*Bull. Gén. de Thérap.*, Aug. 30, 1886; *Dublin Journ. of Med. Science*, p. 214, Feb., 1887) has investigated clinically the action of coto and its active principle, cotoïn, in various forms of diarrhœa. The drug has previously been recommended, but not much employed. Houchard administered it hypodermically, but without satisfactory results; and prefers to give the powders by the mouth, in doses of twenty centigrammes twice or thrice daily. In ten cases of diarrhœa with tuberculosis, in eight of catarrhal diarrhœa, and in three of arthritic diarrhœa of four months' standing cotoïn was thus given, and in all, except two cases of tuberculosis, with successful results. Froumüller, out of ninety-three cases of diarrhœa following typhoid fever, noted only nine cases of failure; while Parsons, Burney Yeo, and Kohrer have had great success with it in infantile diarrhœa.

#### 15. Tropical diarrhœa.

Some important work upon diarrhœa has been done during the year by Vaughan, Holt, and others, having special reference to its origin in fermentative changes in the gastro-intestinal tract, and its treatment by antiseptic remedies. The articles mentioned are, however, more especially concerned with the diarrhœa of children, and are therefore omitted here.

G. H. Young (*Indian Medical Gazette*, Dec., 1886) has used *pepsine* in a considerable number of cases of chronic tropical diarrhœa, and always with success. It is of most service when the motions are large and frothy. Then, he believes, there is insufficient digestion and fermentation of the food, and astringents are injurious. A milk diet, a half-pint every three hours, is to be prescribed, and 5 grains of pepsine to be given four times a day with the milk. It is also claimed that pepsine will check the diarrhœa of typhoid and dysentery.

#### 16. Dysentery.

Rennie (*Indian Medical Gazette*, Dec., 1886) has found that *cannabis indica*, which was recommended to him by an old Indian resident, is of great service in dysentery, particularly in the sub-acute and chronic forms. He offers the following prescription:—

R	Tinct. Cannabis Indica.	...	...	min. xv.
	Bism. Subcarbon.	...	...	gr. v.
	Mucilag. Acaciæ	...	...	ʒss.
	Misce et adde			
	Tinct. Zingiberis	...	...	min. xx.
	Tinct. Cardam. Co.	...	...	min. xx.
	Sp. Chlorof.	...	...	min. xx.
	Aquam Cinnam. ad	...	...	ʒj.
	Ter die sumend.			



Larger doses, and even this dose, occasionally produce ill effects, and therefore it is better to give the mixture after meals. The treatment should be continued for several days after symptoms have disappeared.

### 17. Diarrhœa.

Drs. Bond and Edwards (*Practitioner*, vol. ii., p. 8, 1887) have followed a recommendation by Dr. Turner (*Lancet*, ii., p. 536), and have frequently used cannabis indica for summer diarrhœa according to the following formula :—

R	Tinct. Cannab. Indica.	...	min. x.
	Liquoris Morph.	...	min. v. vel min. x.
	Spt. Ammon. Arom.	...	min. xx.
	Spt. Chlorof.	...	min. xx.
	Aquam ad	...	3j.

To be repeated every one, two, or three hours, according to circumstances. No food to be taken for several hours, but only a little brandy-and-water.

The Indian hemp, they believe, counteracts the "bilious" effect of the morphine and prevents the loss of appetite. In some other forms of diarrhœa also, the remedy was found to be effectual. Yet in tubercular diarrhœa, and in the excessive diarrhœa of typhoid fever, it was of but little avail.

### 18. Peristalsis and the action of purgatives.

Heiss (*Deutsch. Archiv f. klin. Med.*, vol. xl, part 1) has investigated the action of purgatives in a novel way. Through a gastric fistula he introduced into the duodenum a ball, which could be distended so as to completely occlude the intestinal canal. A tube passing beyond the ball allowed of the introduction of various drugs into any desired portion of the intestinal canal, without traversing the intermediate portion. Moreover, the movements of the ball indicated the rapidity of the peristaltic motion at any particular part. It was found that peristalsis was most rapid in the upper part of the small intestine, and that the movement also diminished in power the farther down the intestine that the experiment was made. The effect of four substances upon the rate of peristalsis was tried, with the effect that infusion of senna caused the slowest motion, croton oil the fastest; while castor oil and sulphate of soda were intermediary to the former two. Lastly, complete obstruction of the bowel was produced, at a point a certain known distance from the pylorus. Various drugs were then introduced above and below the obstruction respectively, and their effects in either case was noted. If introduced above the obstruction, sulphate of soda, castor oil, calomel, senna leaves, croton oil,

colocynth, and chlorate of sodium produced vomiting and increased peristalsis, but no purging. Introduced below the obstruction, however, they at once caused diarrhœa; thus proving that it is only from the actual contact of these drugs with the intestine that the purgative action arises.

### 19. Constipation.

Sir Andrew Clark (*Lancet*, vol. i., p. 1, 1887), in discussing the treatment of simple constipation, shows that there is commonly a great abuse of purgatives, and that this brings in its train a condition worse than that for which relief was sought. Sir Andrew suggests that all the troublesome consequences of constipation may be avoided by attending to the conditions of healthy defæcation, which he groups as follows:—

1. Plenty of solid and fluid digestible food. People leading a sedentary or a society life eat too fine foods, and drink too little liquid. Hence there is a deficiency of intestinal secretion, and an insufficient amount of refuse matter in the bowel to secure daily relief. It is an error to treat such constipation by hard, indigestible, or irritating articles of food, for thus a catarrhal diarrhœa may be set up.

2. A moderately full colon. An external stimulus, in the shape of an adequate amount of retained fæces, is necessary for the production of strong peristaltic action.

3. Regard to the promptings of nature.

4. Daily solicitation of nature at an appointed time.

5. The co-operation of expectation and will. The practice of slight alternate contraction and relaxation of the anal sphincter sometimes provokes exceptionally active peristalsis of the lower colon.

6. Contentment with a moderate discharge.

Sir Andrew believes that, in the majority of cases, constipation may be overcome without a resort to purgatives, by attention to hygienic rules. Thus, three meals a day of plain food should be taken, a quarter to half a pint of hot or cold water may be drunk night and morning, the clothing should be warm and loose, a cold or tepid bath be taken every morning, walking exercise for at least half an hour daily should be enforced, and no pressure should be exerted on the bowels by a long-continued constrained position. As artificial helps to defæcation, if such be necessary, massage of the abdomen, in the direction of the colon, and about a dessert-spoonful of lucca oil, twice a day, with the meals, are recommended. A small enema of equal parts of olive oil and water may be used; and, if drugs are necessary, the following pill is the best:—

R	Aloïnæ	...	..	...	$\frac{1}{2}$	gr.	
	Ext. Nucis Vom.	..	...	...	$\frac{1}{2}$	gr.	
	Ferri. Sulph.	...	...	...	$\frac{1}{2}$	gr.	
	Pulv. Myrrhæ	...	..	...	$\frac{1}{2}$	gr.	
†	Saponis	...	...	...	$\frac{1}{2}$	gr.	Ft. pil. j

The pill should be taken half an hour before the last meal of the day, and its quantity gradually diminished. Ipecacuanha may be added to soften the fæces, if there be no weakness of the heart; and belladonna will relieve any griping, if such be produced. For those with whom the aloïn disagrees, five to twenty drops of the fluid extract of cascara sagrada, in an ounce of water, at bed-time, may be prescribed; or else two or three grains each of dried carbonate of soda and powdered rhubarb, before the mid-day meal.

## 20. Electricity and massage in chronic constipation.

Leubuscher (*Centralbl. f. klin. Med.*, No. 25, 1887) points out that in most instances we may regard insufficiency of the peristaltic contractions as the immediate cause of chronic constipation. He investigated the action of electricity upon the intestines of healthy students, and found that in every case defæcation occurred sooner after the use of the galvanic than the faradic current. One electrode made of sponge was in each instance placed in the rectum, and the other externally at some spot in the course of the colon, while in the case of the galvanic current the kathode was applied internally. Pursuing the experimentation in cases of chronic constipation, and in exactly the same manner as above described, the author found again that the galvanic current was the more powerful in stimulating the intestine, thus being opposed to the observations of Erb on the same subject. The fæces were much softer than before treatment was employed, leading the author to surmise that the intestinal glands were stimulated thereby. On the whole, however, the results can hardly be called brilliant. Two cases derived no benefit, nine cases were benefited during the treatment but afterwards relapsed, and in only four cases was a permanently good result obtained.

Leubuscher employs massage in a simple manner. The abdomen is firmly rubbed after being anointed with vaseline, strong pressure being at the same time applied with the thumb or thenar eminence in a direction from the middle line outwards and downwards. In all cases some amount of improvement was noted, but chiefly in three patients, whose general condition also improved under the treatment.

As regards the choice of these two remedies, massage seems indicated chiefly in cases in which there is great weakness of the



abdominal muscles, and in those suffering from chronic hyperæmia of the intestine with atrophy of their muscular structure, as in the constipation which accompanies chronic pulmonary and cardiac disease, and in intestinal catarrh of long duration. Electricity is indicated where there is, in addition to the constipation, a general nervous disturbance—in cases due to chronic cerebral and spinal diseases, and, finally, in those cases which show hard fæces after the use of purgatives. These two indications are not always sharply separated. It is also added that those cases of constipation which are associated with painful spots in the abdomen are advantageously treated by massage, the pain being generally relieved at the same time as the constipation.

### **21. Acute intestinal obstruction treated by morphia and massage.**

Fr. Betz (*Memorabilia*, 1886). In the case of a woman aged 50, who had been operated upon six months previously for incarcerated hernia, there appeared tympanites with eructations after six days' constipation. On further examination an internal constriction of the intestine was diagnosed. Stimulating enemata being of no avail, morphia was given every six hours in doses of three-tenths of a grain, and the abdomen kneaded and rubbed vigorously all over every few hours. After nine doses flatus was passed per anum, and the constriction was taken as relieved. Castor oil was given, and in a few hours effected an action of the bowels.

### **22. How to prescribe santonin.**

Norderling (*New York Med. Rec.*, p. 465, 1887), shows that santonin should be prescribed with a large quantity of fatty matter, and for the following reasons. Santonin dissolves in the various juices of the alimentary canal. It is very readily dissolved in the gastric juice, and is then taken into the circulation before it reaches the intestine. If in an oily solution it is not absorbed by the stomach, but passes on, and Küchenmeister has shown that ascarides are not killed by santonin suspended in water, but are destroyed by it when in an oily solution. The best effect is obtained by three grains of santonin in two ounces of oil, to be taken in four doses. Norderling further recommends that one drop of wormseed oil should be added to each dose, since it is poisonous to the lower organisms. Castor oil should be added, but not in too large a quantity—two drachms to each dose will be sufficient—for too strong peristalsis prevents the oil remaining in the bowel a sufficient time to kill the parasite.

### **23. Treatment of ascites.**

Dujardin-Beaumetz (*L'Union Médicale*, Sept., 1886) has found

calcium hippurate, recommended by Poulet and Marieux, of no value in the treatment of ascites from cirrhosis of the liver, and insists upon the value of early tapping, and not waiting until serious symptoms of respiratory oppression make their appearance.

**Chéron** (*L'Union Médicale*, Dec., 1886), discusses the pathology of various forms of ascites. He insists upon the fact that ascites may be present in cirrhosis of the liver in the early stages, without being of grave significance. It is then, he believes, following the explanation of Courtray de Pradel, the result of chronic phlebitis and possibly thrombosis of the veins of the stomach and intestines, and at this stage the liver is capable of resuming its normal condition. Later on, however, a similar process extends to the intra-hepatic branches of the portal vein. Then permanent ascites is the result, and is of grave import.

**Dehio** (*St. Petersburg med. Woch.*, No. 18, 1887), describes a case in which after the performance of paracentesis for ascites, the pulse rate rose to 182 beats in the minute, and continued at about that rate for some six days. There was no concomitant increase in the number of respirations, or in the degree of body temperature.

#### **24. Peritonitis.**

**Lewin** (*Berl. klin. Woch.*, No. 44, 1886), in two cases of acute peritonitis, with severe meteorism, tried the expedient first recommended by Kussmaul in such cases, of washing out the stomach. In both cases a favourable result was obtained. Opium, which before the washing had been quite ineffectual, afterwards produced the usual beneficial effects. Both cases were due to herniotomy.

**Krönlein** (*Archiv f. klin. Chir.*, vol. xxxiii.) discusses the treatment of acute general purulent peritonitis. In cases which had come under his care he tried to remove the cause of the disease, and at the same time undertook to thoroughly disinfect the peritoneal cavity. Of three cases, one only was attended with success. This case was one of rapid collapse after a week's suffering from vomiting and colicky pains, induced by an excess of cherries eaten with the stones. On opening the peritoneal cavity, it was found filled with purulent matter, smelling strongly of fæces. It was thoroughly washed with  $\frac{1}{2}$  per mille solution of corrosive sublimate, but no point of ulceration or perforation could be discovered. Recovery was complete. It would, according to the author, be fatal to delay operation. This should be resorted to as soon as the patient appears to be in danger.

#### **25. Nutritive value of peptonised enemata.**

**Ewald** (*Therap. Monatsh.*, March, 1887) contends that experi-

ments with nutrient enemata made upon animals or healthy individuals are likely to differ materially in their results from those made upon persons who require such enemata on account of bodily illness. He has, therefore, instituted a series of experiments to investigate the subject more satisfactorily. The experiments were accordingly made with every foresight upon three individuals of 57, 34, and 32 years of age respectively. The first suffered from paralysis of the left arm, but was otherwise healthy, and weighed 47·7 kilos; the second was weak-minded, anæmic, but moderately well nourished, and weighed 48·2 kilos; the third suffered from neurotic dyspepsia, could take only minimal quantities of food without vomiting, and weighed 44·9 kilos. The substances employed were: Kemmerich's meat-peptone, Merck's casein-peptone, an emulsion of raw eggs, and the same of weakly peptonised eggs. These were given either on one day or more commonly in periods of three to five days, the observations being continued during three months. The preparation of eggs with pepsin and hydrochloric acid nearly equals in amount of peptone the peptonised foods above mentioned. The results were as follows:—Single doses of the ready-bought peptones had an uncertain and varying effect on the nitrogenous metabolism, the amount of nitrogen in the urine being sometimes much increased, frequently, however, not altered. The enemata invariably produced an increase in the quantity of the urine out of proportion to the quantity of water they contained—an effect probably due to the diuretic action of the salts present. In periods of from three to five days from 40 to 75 grammes of the ready-made peptone, or a corresponding quantity of from four to six eggs, was given. The greatest effect on the metabolism was produced by the casein-peptone; that of the meat-peptone and eggs was equal; and on ceasing the administration of peptones by enemata, the metabolism sank to a very low figure, in spite of nitrogenous diet being given by the mouth.

A more important question than that of metabolism is that of absolute gain, *i.e.*, the nitrogen retained in the body, or, in cases of starvation, removed from the pre-existing supply within the organism. The smallest gain is noted in the case of casein-peptone, the greatest in peptonised eggs, meat-peptone and non-peptonised eggs occupying a middle position. The total exclusion of peptones, or eggs, is followed by loss of nitrogen. The author furnishes figures for both series of experiments, but insists that they are not to be taken as absolute values but only as relative indications (which, however, always preserve their ratio to each other) of the nutritive values of the substances under considera-



tion. The absolute metabolism, or increase, depends upon idiosyncrasies, and upon various external circumstances, which have a potent influence on internal digestion.

The following conclusions are drawn from these experiments :

1. Absorption of food-stuffs from the rectum is an established fact. The amount to which this absorption takes place varies with certain uncontrollable influences, and is not a process to be absolutely regulated at pleasure.

2. The capacity of a food for being absorbed does not depend upon the amount of peptones it contains, since eggs, unpeptonised, are absorbed quite as easily, and are productive of greater gain than the casein-peptone of Merck, which contains five times as much actual peptone.

3. Unpeptonised hen's eggs furnish the same, and peptonised ones a better result than the ready-made commercial peptones. They are also very much cheaper.

In the April number of the same journal, Dr. Ewald gives the following prescription for a peptonised enema :

A clyster of warm water, about 250 cc., is given as a preliminary, and time must be allowed for the resulting evacuations, often two or three in number, to pass away.

The nutrient enema should never exceed in bulk 250 cc. (about 8 fluid ounces), and it is better to divide this quantity into two or three separate enemata to be given in the course of the day. To prepare the enema, beat up two or three eggs with a table-spoonful of cold water. Boil some whole-meal with half a teacupful of a 20 per cent. solution of grape-sugar, and add a wine-glassful of claret. Add to this the eggs, stirring all the while, taking care that the solution be not hot enough to coagulate the white of the egg. It is of advantage to add a tea-spoonful of peptone, though this is by no means necessary. The injection should be made by means of a syringe, or irrigator, having a long soft rectal tube with a wide mouth, and after administration the patient should remain for a few minutes in a recumbent or lateral position.

[The above research, by a most able observer, is of great value to the physician. But little has hitherto been done in working out the science of rectal-feeding, and the establishment of its principles upon a true physiological basis cannot but greatly assist the practical use of the method.—R. M.]

## **26. Fats and fatty acids in chronic wasting diseases.**

Senator (*Therap. Monatsh.*, March, 1887) remarks that of the several ways and means of increasing the fatty tissues of the

body, the main one is to increase the ingestion of fat. The only remedial agent, as distinguished from fat contained in the food, which has kept its place in medicine is cod-liver oil. In the administration of this remedy, however, several difficulties are experienced; firstly, the objection which many people have to taking fats, especially the liquid ones; and, secondly, the fact that fats are not digested in the stomach, but, since they enclose the other food stuffs, actually retard or prevent the digestion of the proteids. This has been experimentally proved by Ewald and Boas, and, as a matter of common experience, a small part of the fats is split up in the stomach into fatty acids and glycerin. The latter is again easily decomposed, especially in cases of catarrh of the stomach, into the volatile fatty acids (propionic, butyric, &c.). True digestion of the fats commences in the intestines under the influence of the pancreatic juice and of the bile. By these agents they are split up into fatty acids and glycerin. The emulsifying action of the pancreas was formerly held to be the main agent. But fats which do not become liquid at the body temperature, and hence can form no emulsion, are, nevertheless, absorbed. The fatty acids are absorbed, either as such or after being saponified by the alkalies of the bile. The glycerin which remains is, so far as we know, of very little use, and is probably even deleterious to the deposition of fat in the tissues. Hence, this result may be obtained by the fatty acids alone, without the necessity of giving the glycerin. The substances that may be given are, therefore—firstly, those related to the fats, but in which the fatty acid is combined not with glycerin but with another alcohol. The chief of these is cetaceum (spermaceti); it is well borne, especially if given finely-powdered, and mixed with sufficient sugar to sweeten it. From ʒij. to ʒj. may be given, varying, of course, with the individual patient. The fact that neither the unaltered fat nor the fatty acid are discoverable in the fæces proves that it is thoroughly digested.

The author has also tried pure fatty acids, employing a mixture of solid and liquid ones in such proportions that they became liquid at the temperature of the body. Pills were given containing 5 grains of palmitic and  $2\frac{1}{2}$  grains of oleic acid. It has, however, been found more advantageous to give the final product of the digestion of such matters, namely, soluble soaps. These represent in the digestion of fats what peptones are in the digestion of proteid substances. The solid soaps of soda alone were tried, chiefly in the form of the *sapo medicatus* of the German Pharmacopœia. This is, however, split up by the gastric juice, the fatty acid being thus set free; and, in order to prevent this, the author

gives the soap in a keratin capsule which passes unaltered through the stomach and is dissolved off in the intestine.

The soap is also well taken in the form of powder, with powdered gum, or in the shape of pills.

The diseases in which the fatty acids and the soaps have been found most useful are: Diabetes mellitus, in which affection the pancreas is frequently atrophied or otherwise diseased; phthisis; chronic jaundice, where the entrance of bile and pancreatic juice into the intestine may be interfered with; and finally malignant disease of the stomach and intestine. Both fatty acids and soaps are well digested in these cases, and have never, in the author's experience, caused diarrhœa. It is of advantage not to restrict oneself to a single preparation, but to give several at a time or alternately. Spermaceti is specially recommended as conveniently replacing cod-liver oil.

### **27. Nutrient suppositories.**

Dr. Gadd (*Therapeutic Gazette*, May, 1887, and *Practitioner*, ii., p. 134, 1887) gives the following method for preparing nutrient suppositories:—

Take 16 ounces of finely-minced beef off the rump, add 1 pint of water, 2 fluid ounces of liquor pancreaticus, and 1 drachm of sodium carbonate. Keep this mixture at 120° to 140° F., stir occasionally for from 4 to 6 hours, adding water from time to time as it is lost by evaporation. Strain by gentle pressure through muslin. Neutralise with hydrochloric acid in a porcelain dish, and, with a moderate degree of heat, evaporate down to the consistence of an extract, or better, to dryness. It is suggested that a much better preparation could be obtained by evaporating in vacuo. The extract weighs from 290 to 450 grains for each pound of beef used. Rub up the extract with a little water in a mortar until it is uniformly smooth. Next add glycogelatin or cacao butter in a fused condition, stir the whole until it is about to congeal, then pour into moulds of a suitable size. Glycogelatin is made by soaking 1 ounce of pure gelatin in 1 fluid ounce of water until the whole of the water is absorbed, dissolving this in 3½ fluid ounces of glycerine by means of a water bath, and allowing the mass to cool and solidify. All suppositories should be oiled before introduction.

### **28. The grape cure and its effects in diseases of the digestive organs.**

Hausmann (*Therap. Monatsh.*, Sept., 1887), who has had great experience with this mode of treatment at Meran, one of the centres for the "cure," has come to the following conclusions:—

A certain result may be looked for in cases of ptyalism, when



occurring in connection with disturbances of the stomach, and especially of the intestines. In the first case observed, the complaint had existed for 15 years, being accompanied by chronic constipation. After six weeks of treatment the ptyalism disappeared and never returned. In this case, as in all others of the same nature, vigorous exercise has a harmful influence in retarding the good effects of the cure, so that riding, climbing, and even driving and massage, are forbidden. The amount of grapes consumed per diem did not exceed 2 kilogrammes.

Not all cases of gastric disorder are suitable for this treatment. It is, however, very successful in the dyspepsia which accompanies chlorosis and other anæmic conditions, such as are produced by loss of blood and menorrhagia; likewise in dyspepsia appearing as part of severe neurasthenia, whether occurring in old or young patients. In chronic constipation this method is of special value, the more so if the grapes contain a not very large quantity of sugar. The effect is probably due chiefly to the tartrates and phosphates, which have a laxative effect. Such patients are made to take a certain amount of exercise, and to rise early. The physical exercise may aid in favouring a greater production of carbonic acid, which stimulates the vermiform contractions of the intestine. For such cases the grape cure is considered to be desirable as an after cure to a course at Carlsbad or Marienbad, to prevent a recurrence of the complaint.

Stout patients suffering from hæmorrhoids and a tendency to fatty infiltration of the various organs are made to take regular increasing exercise, and tepid or cold douches; and are under these circumstances much benefited by the grape cure. The effects are not quite so favourable in the case of thin, anæmic, and constipated individuals who suffer from hæmorrhoids. The grapes should here be given in quantities not exceeding  $1\frac{1}{2}$  kilogrammes, whereas in the cases previously mentioned they may be taken in double that quantity per diem. Positively bad results are observed in cases of cancer of the stomach and tuberculous disease of the intestines. As regards the method of applying the treatment, it requires great care, and not infrequently changes are desirable during the progress of the cure. For patients in whom chiefly a purgative action is desired, the end of August will be a suitable time at Meran, as the grapes need not be perfectly ripe. But in the case of neurasthenic individuals, and those suffering from pulmonary disease, or merely requiring an after-cure, treatment should not commence before the end of the first week of September. Some figs or pears may be given with the grapes, in order to heighten the effect, and to prevent disgust of the one

fruit. The teeth should be carefully cleansed after every portion of grapes taken, by means of some alkaline application—*e.g.*, a magnesia wash. Some patients suffer severely from inflammation of the mucous membrane of the mouth and throat, and they must either forego the cure, or take the expressed juice. The juice is a poor substitute for the grape, and one not so easily digested, for the secretion of saliva is not stimulated by it. The skins and stones should never be eaten, nor should the grapes be taken cold in the morning, as they are then apt to produce colic; they should accordingly stand over night in the room, or be warmed with hot water. The quantity to be taken varies from  $\frac{1}{4}$  to 4 kilogrammes, the mean being  $1\frac{1}{2}$  kilogrammes to be eaten in two or three portions, an hour or two before breakfast, and four hours after a mid-day dinner. The diet, though varying according to the complaint, should be throughout easily digestible, and fat meat, cheese, beer, and vinegar, are accordingly prohibited. Milk must be taken only some time after the grapes.

# DISEASES OF THE KIDNEY, DIABETES, ETC.

BY CHARLES H. RALFE, M.A., M.D. CANTAB., F.R.C.P. LONDON,

*Physician to the London Hospital.*

---

## **1. Treatment of nephritis.**

(a) Professor Semmola (*Wiener med. Blatter*, No. 49) points out that the peculiar cachexia in chronic Bright's disease is not in relation with the withdrawal of albumin from the blood, since even in quite an early stage of the disease a generous nitrogenous diet not only fails to do good, but generally aggravates the condition of the patient. The cachexia he believes is due entirely to a deep-seated failure of the general functions of assimilation. Professor Semmola is also of opinion that nephritis only plays a secondary part in regard to the production of albuminuria, and he is hopeful for successful results if treatment is commenced sufficiently early, and before structural changes have far advanced, and also if continued sufficiently long. He strongly insists on the use of an exclusive milk diet, all other form of nitrogenous food being cut off. He combats the idea that the beneficial effect of milk is from its action as a diuretic. When three or four pints of milk are taken daily, of course the quantity of urine is increased; but if the same quantity of water is taken with dry food the amount of urine is also increased, but no benefit accrues to the patient. With regard to the beneficial effect of the milk diet at an early stage of Bright's disease, I may mention that in the "Year-Book" for 1884 a case was referred to, which I saw with Dr. Embleton of Bournemouth, in which exclusive milk diet had been commenced with marked benefit to the patient. It was rigorously maintained for nearly two years, and then gradually relaxed, with the result, I should say, of a perfect cure, the urine being free from albumin except when great fatigue is undergone or any marked indiscretion in the way of diet is committed, and then the amount is inconsiderable, and disappears in a



day or so. The patient, moreover, has entirely regained his general health. To gain, however, such positive results, as Professor Semmola says, the milk diet must be continued long after albumin has ceased to appear. Professor Semmola recommends, in addition to the milk diet, the methodical excitation of the functions of the skin by massage, douche, and vapour baths. Cold water should not be used, as the patients are wonderfully sensitive to cold, which tends to aggravate the disease. As a means of excitation of the skin, I have found the use of hot sea-water or sea-salt douches, and the use of salt water packs, like those of Droitwich, most useful, especially for the relief of uræmic symptoms. Professor Semmola also insists on the patient living in a dry climate, having a very uniform range of temperature. Under the inhalation of oxygen the albuminuria often rapidly disappears. When the patient first comes under treatment he advises the use of the iodide and chloride of sodium in increasing doses, and then, as the albumin diminishes, phosphate of soda, or hypophosphite of soda and lime. He objects to the use of astringents, gallic acid, perchloride of iron, and acetate of lead ; these, if used, he points out, must exert an equally astringent action on the capillaries of the skin as on the kidneys, and thus tend to diminish the cutaneous function, and would therefore operate in a manner opposed to the general principles that ought to be our object in the treatment of Bright's disease. With regard to the objection to the use of direct astringents I entirely agree, but in the case of perchloride of iron I have obtained such beneficial effects from its judicious use that I must think Professor Semmola wrong in this conclusion. Perchloride of iron acts within the system as a powerful oxidising agent ; it stimulates all the functions, among others that carried on by the cutaneous capillaries. Its use is especially called for at the time when dropsy or œdema begins to yield to treatment.

(b) **Professor H. Nothnagel** (*Med. Pres. and Circ.*, June 29, 1887) observes that as the prognosis of contracted kidney is absolutely calamitous, so are the therapeutics of chronic granular atrophy limited to merely intelligent dietetic measures. Thus, we observe the patients feel well so long as diuresis is normal, but when this is decreased they feel worse, and uræmic manifestations are apt to occur. We know, moreover, that diuresis depends upon the tension of the artery, and therefore we are to take the same measures which we observe in cases of valvular heart disease, as, for instance, excluding excessive bodily exercise, the use of alcoholic drinks, coffee, tea, and hot beverages, so as to keep the heart as active as possible. In digitalis we have an excellent

diuretic, but he reminds us of the danger of employing it rashly in contracted kidney, lest by causing sudden elevation of the pressure in the arterial system it may lead to cerebral hæmorrhage. Sweating is of no use in cases of granular atrophy, indeed, may, under some circumstances, do harm, unless the patient is dropsical. Professor Nothnagel does not believe in such astringents as tannin, gallic acid, alum, etc., though in the acute hæmorrhagic forms he thinks acetate of lead has a certain degree of efficiency. Nitric acid, which has recently been again brought into fashion in England, as well as iodide of potassium and sodium, has failed to convince him of their usefulness. He strongly recommends confining the patient to bed for weeks, in some circumstances for months; this ensures an equal warmth for the surface of the body, and can be equally well obtained in suitable climatic health resorts, such as Cairo and Algiers. Again, we must endeavour to raise an equable hyperæmia of the surface of the body by means of warm baths, which should be taken daily, the patient being afterwards wrapped up and made to remain in bed. With regard to diet, the best is the absolute milk diet; next, milk soups, rice milk, milk gruel, and so on, if it agrees with the patient; otherwise, diet as little stimulating as possible. With regard to the vexed question whether eggs may be permitted in the diet of albuminurics, he is of opinion that they may be used in small quantities. Mineral waters are of no special value, but still the waters of Carlsbad, Kissengen, Homburg, Vichy, are sometimes useful, though they will not cure the nephritis. Purging should not be resorted to for the relief of dropsy, since violent catharsis removes the contents of the bowels out of the small intestines and thus robs the patient of his proper nourishment. Diaphoresis may be excited by jaborandi or pilocarpin, which differ from other diaphoretics by their action on the nerves of secretion of perspiration, and thus in a secondary way divert the blood to the skin. Vapour baths may be employed in cases of contracted kidney with advantage when there is dropsy; but as stated above, they may do harm when employed whilst arterial tension is still high, and before dropsy occurs. Speaking of diuretics, he mentions the surprising effect often obtained by administering calomel (*see* "Year-Book," 1886, p. 66) after the manner of Professor Jendrásik of Pesth. Nothnagel gives calomel in doses of 0.2 grmes. three or four times daily for three or four days consecutively. When the calomel begins to act, generally on the second or third day, a sudden flood of urine takes place, raising it from 500 cc. to 700 cc. to 2000 cc. to 5000 cc. in the twenty-four hours. That flow lasts for a few days, and then gradually

resumes its former proportions, if the drug is withdrawn. If there is no affection of the gums the calomel may be given again after a few days. If the calomel causes diarrhœa it must be prescribed with opium. The pulse curve and the cardiac activity are not much changed after using calomel, and it is interesting to see that only the diuresis is increased.

With respect to the employment of calomel as a diuretic in chronic Bright's disease, if the explanation of its *modus operandi* offered in last year's "Year-Book" (p. 66), be correct, then nothing could be more inadvisable than its employment, since it is supposed that its diuretic effect is caused by its hæmolytic action on the blood-cells, leading to an increased production of urea, hence the diuretic action. Any drug that causes further impoverishment of the blood and increases the anæmia ought to be carefully avoided, however successful it may be in removing the dropsy, since it will only add to the existing debility of the patient. The treatment of dropsy by mercury or calomel is only admissible when dependent on disease of the heart or liver. When due to renal disease, the employment of large doses of copaiba resin, as suggested by Dr. Wilks, is safer, and at the same time quite as efficacious. Professor Nothnagel very properly distinguishes between the kind of baths that are most useful in the different stages of contracted kidney. Whilst the tension is high and there is no dropsy the equable hyperæmia of the skin is best obtained by warm baths, whilst vapour and dry-air baths are generally injurious at this stage; as I have pointed out in the preceding paragraph, 1 *a*, the use of sea water, or sea salt dissolved in water, increases the hyperæmic action of the baths on the skin. Vapour and hot-air baths are indicated whenever dropsy is present.

## **2. Diet in albuminuria.**

(*a*) Dr. Grainger Stewart (*Practitioner*, Aug., 1887) details some experiments confirming the statement that the introduction of raw egg albumin into the stomach induces temporary albuminuria. The albumin is, however, in small quantity, and is in the form of serum albumin. Experiments with cheese proved that when it is eaten in reasonable quantities it has little or no effect in producing albuminuria in healthy persons. Dr. Stewart's observations on the effect of different diets on patients suffering from albuminuria has generally confirmed opinions already formed. Thus in acute inflammation, spare diet, plenty of water, and abundance of milk, in granular kidney also a spare diet; whilst in waxy degeneration the diet should be generous. In cases of simple persistent albuminuria, Dr. Stewart does not think much is to be gained by



very special dieting, but attention should be paid to the effect of any particular food in each individual case. Contrary to Dr. G. Stewart's observations, **Dr. Do'radin** (*St. Petersburg Inaugural Dissertation*, 1885) has stated that egg albumin does not produce albuminuria, and also was of an opinion that patients suffering from albuminuria were benefited by the employment of eggs in their dietary. On the question whether eggs are admissible in the diet of patients suffering from albuminuria, opinions widely differ. Thus **Sæmmler**, **Senator**, and **Gabler** reject them, chiefly on account of their highly nitrogenous composition, and the necessity, as they maintain, of giving the kidneys physiological rest by diminishing nitrogenous excretion. **F. Niemeyer** and **Oertels**, on the other hand, do not object to their use. I believe the true answer to this vexed question is to be found in the form of albuminuria in which it is proposed to give or withhold them. I should not advise their administration in a case of recent acute nephritis in which physiological rest may lead to perfect recovery; nor in granular kidney with high arterial tension. But in moderate quantities when there is profound cachexia, the pulse flagging, and dropsy increasing, they may be given with the view of strengthening the patient to struggle with his increasing difficulties; and for this purpose I think them better than meat, which the patient can rarely digest, and is often disgusted at.

(b) **Dr. Korxounow** (*Wrotsch.*, x. 1886). The author made his observations on patients, the subjects of uncomplicated renal diseases. The patients were first placed on milk diet "*à discretion*." After four or five days warm baths (92° F.) were administered in addition. The time of the baths lasted fifteen to twenty-five minutes, and afterwards, to continue the action, the patients were wrapped in blankets. Under the influence of the milk diet the patients lost weight, and the dropsy disappeared little by little. In two cases, however, after the dropsy had been removed, the patients began to increase in weight. The quantity of milk ingested varied from nearly four to six pints daily before the commencement of the baths; and to seven and a half pints during their continuance. In no case were digestive troubles observed, and the administration of the baths was always followed by a diminution in the quantity of urine secreted. Before the administration of the baths the quantity of nitrogenous materials assimilated by the organism were 82, 93 in 100 of their total quantity. The administration of the baths augmented the quantity of nitrogenous material, assimilated to 86, 95 in 100. The author considers this augmentation explained by the diminution of the œdema of the mucous membrane of the stomach under the

influence of the hot baths. Whilst the treatment augments the excretion of nitrogen, the author admits the possibility of an increase of the albuminuria under the influence of a milk diet. In a case of acute nephritis under observation at the London Hospital, an exclusive milk diet caused considerable diuresis and the rapid diminution of the dropsy, but an increase of the albuminuria. In more chronic forms I have found the diuresis still considerable, but the albuminuria diminishes as the treatment is continued. Probably the best results from an exclusive milk diet will be obtained in the more chronic cases.

### 3. Hyoscine as a narcotic in renal diseases.

Dr. Tirard (*Practitioner*, Feb., 1887). The importance of finding a suitable hypnotic in cases of Bright's disease is often felt; chloral and bromide of potassium may be employed, but these often lose their effect. In such cases, Dr. Tirard advises the employment of hydriodate of hyoscine subcutaneously injected, the solution being 1 grain dissolved in 200 minims of water. Of this 1 to 2 minims are to be injected at bedtime. The patient remains drowsy the whole night, but restless and wandering, though in spite of this he wakes refreshed in the morning.

### 4. Treatment of uræmia.

Dr. James Andrew (*Practitioner*, July, 1887) lays down the following points as of prime importance in guiding our treatment in any given case of *uræmia*; our success depending upon the accuracy with which we are able to determine the share taken in the production of the symptoms, by viz. (a) fouling of the blood consequent on impaired activity of the kidneys; (b) some form of anæmia not necessarily complicated by any actual impurity of the blood; (c) imperfect nutrition and degeneration of all organs, especially of the nervous centres. The cases of uræmia which cause the least doubt and anxiety are those which occur early in the acute forms of renal disease, in persons who have been previously healthy, and not past middle life. Here *purgatives* and *diaphoretics* may be used boldly if there is not complete suppression of urine. With regard to the employment of *diuretics*, that depends on the meaning we attach to the word. If it means something that simply increases the secretion of urine, as elaterium, pilocarpine, digitalis, antimony, vapour bath, and even venesection, then by all means employ them. But if used in the more restricted sense, of some substance or substances which by direct action on the secreting structure of the kidneys stimulates them into activity, then such drugs should not be given; since the blood is already loaded

with, and the kidneys exposed to, the irritating action of urea, which is one of the most powerful natural diuretics. In fact, the suppression of urine is due in no small degree to this over-stimulation, and to add to it can hardly be scientific. The only possible exception to this Dr. Andrew would permit is the addition of a small quantity of some salt of potassium or lithium to the diaphoretic or purgative dose, and this with a view to its solvent action on urates, that they may pass out of the tubules in a more soluble form than as sodium salts. If the skin is dry, then a hot-air bath is of the greatest service, but if immediate and profuse sweating is thought desirable, then recourse must be had to subcutaneous injection of pilocarpine. The application of *dry cupping glasses* over the loins is followed by an increased flow of urine and a marked relief to the more urgent symptoms; if the patient is young and vigorous 2 to 3 ounces of blood may be abstracted with advantage. When a uræmic convulsion has come to an end, half-ounce doses of *liquor ammonii acetatis* should be given four or five times a day; and to this, if the pulse be unduly firm, ℞xv.—xx. of *antimonial wine* should be added. For the fits, it is of the greatest importance to prevent their recurrence, and to gain time for eliminant treatment to relieve the congestion of the kidneys. For this purpose, no drug, given with proper care, Dr. Andrew thinks, is equal to *chloral hydrate*, in doses of 10 grains for the first dose, but after that no more than five. In cases where large quantities are required, the frequency but not the amount of the dose must be increased; doses of 20 to 30 grains must not be given, but 5 grains may be repeated every half-hour. If the fits recur, the treatment of the late ones must be less active; copious discharges of the skin and intestines are less easily borne, and do harm, moreover, by increasing the rapidly-developing anæmia. Here, instead of antimony or digitalis, a few minims of tincture of *nux vomica* may be added to the diaphoretic draught. When the attacks have ceased the treatment need not differ from that of an ordinary case of acute nephritis in which no uræmic accident has taken place. In chronic uræmic attacks, when either from the length of the illness or its nature (*e.g.*, waxy or amyloid degeneration) there is marked anæmia, especially if there be much dropsy, and the urine is still passed in considerable quantities, the principles of treatment are still sufficiently clear, although little can be hoped for from their most skilful application. Dry cupping over the loins, with the careful use of chloral hydrate, are still of service; but purgatives must be given only for the relief of constipation, and not to produce an abundant flow from the mucous membrane; and even diaphoretics ought to



be given tentatively and cautiously. Whenever the opportunity occurs, and the patient seems safe from any sudden accident, the opportunity must be afforded to improve nutrition by *good food*, containing a fair proportion of nitrogen; and four or five ounces of wine, or one of whisky, or of rum in milk, is a valuable addition to the dietary. Lastly, as to hygienic measures, *gentle exercise* in the open air, walking or driving, if possible to do so without risk of catching cold, ought to be regarded as an essential part of the treatment, one main object of it being to secure the perfect assimilation of suitable food. For this a sufficient supply of pure air to the lungs and gentle stimulation of the general circulation are as necessary as food itself. Dr. Andrew does not, however, mention the beneficial action of nitro-glycerine, in doses of  $\frac{1}{100}$  grain, to which attention was drawn in the "Year-Books" for 1885 and 1886, for the relief of uræmic symptoms, and for which it is now largely used on the continent. Two interesting papers, one by Dr. Holst (*St. Petersburg med. Woch.*, Nos. 33 and 34), the other by Dr. Lentovsky (*Med. Privat K. Mors Komii Sborn.*, Nov., 1886), have been published this year on the subject, but as these only confirm the reports published in previous "Year-Books" on the action of the drug for the relief of uræmic symptoms, we need not repeat the conclusions then arrived at again.

### 5. Ammoniacal urine.

M. A. N. Anraef (*Vratch*, 230—232, 1887) finds that *quinol* prevents the alkaline fermentation of the urine, an addition of 2 per cent. keeping urine without apparent change, either to the eye or to test paper, for twenty-five days. One per cent. prevented it from becoming either acid or giving off an ammoniacal odour, the reaction remaining neutral. Quinol decomposes urea proportionally to the amount present in solution; thus, solutions containing 1, 2, and 3 per cent. of urea, showed a loss respectively of 1, 0.5, and 0.2 per cent. According to the observations of Mering (*Archiv f. die gesammte Physiol.*, 62, 276, 1877), *quinol* was found in the urine after the administration of *arbutin*, and Baumann and Preusse found it after taking *phenol*. The employment, therefore, of either of these bodies by mouth in cases of cystitis would prove beneficial in checking the alkaline fermentation of the urine. It is probably owing to this reason that *resorcin*, which is a derivative of *phenol*, acts so beneficially in cystitis and pyelitis, and deserves to be better known than is the case as a remedy for these conditions, both for diminishing the tendency to alkaline fermentation and checking the formation of pus. In a case, sent to me by Dr. Purdy, of Chicago, of calculous pyelitis with cystitis, in which there was a constant

tendency to alkaline fermentation, the urine was kept sweet and the quantity of pus diminished by two-thirds, by 5 grains of resorcin administered thrice daily. In another case in which large quantities of pus were discharged, and the urine was ammoniacal, similar doses of resorcin had the same effect, and symptoms of renal irritation which were imminent speedily disappeared. It is suggested that *quinol* acts like acids on urea, decomposing it into ammonia and carbonic anhydride, but at the same time forming a new combination with the former which is not readily decomposed by sodium hypobromite.

### 6. Morphine in diabetes.

Dr. Mitchell Bruce (*Practitioner*, January, 1887) records some interesting observations made on a patient under his care at Charing Cross Hospital with a view of determining whether (a) there is an *hepatic* and a *non-hepatic* glycosuria; (b) if an hepatic form of diabetes exists, whether the glycemia is due, on the one hand, to non-destruction of hepatogenous sugar, or to excessive flow of sugar from the liver into the inferior vena cava; (c) if due to excessive flow, whether this excess is due, on the one hand, to failure of the glycogenic function, which permits the sugar to be transported unchanged from the intestine, or, on the other hand, to such disorder of the glycogenic function that the storing up process is impaired; (d) lastly, if hydration of the glycogen in the hepatic cells be too rapid, whether the disturbance be referable to nervous causes, local or central. The case selected for observation was that of a young man, aged 26, who was first placed on mixed diet for two days in order to find the maximum daily excretion of sugar, with unrestricted diet, which was 1,360 grains. The patient was then placed on strict diabetic diet for twenty-three days, with the result that the average excretion of sugar did not fall lower than on the short trial with mixed diet. Acetate of morphine, commencing in doses of 15 mins. every four hours, and raised every three or four days, the rigid diet being still maintained, was now commenced. In fifteen days, when about 3 grains of morphine had been administered daily, the sugar had fallen to 912 grains. On the forty-eighth day, with  $4\frac{1}{2}$  grains of morphine, the sugar had fallen to 360 grains; and on the sixty-first day, with  $4\frac{3}{4}$  grains of the drug, sugar was entirely absent. The morphine was now discontinued for seven days, but the rigid dietary was persevered with, and at once the amount of sugar ran up again, reaching finally 2,400 grains per diem. Subcutaneous injections of morphine ( $\frac{1}{4}$ th gr.) were then given thrice a day, and increased by 1 minim every three or four days. The sugar again fell, but in an irregular fashion and to a very moderate extent, so

that 768 grains was the smallest excretion recorded with a dose of 12 mins. three times a day, the diet being still anti-diabetic. The dose of the drug had now to be reduced, as the patient complained of heaviness and dulness; with this reduction, however, the sugar steadily increased again in quantity till it reached more than 3,000 grains on rigid diet. Morphia was again given by the mouth, in doses of 30 mins. every four hours, and the doses steadily increased, rigid diet being still maintained. After seventeen days the amount of sugar fell to 1,000 grains. On the forty-fourth day, with  $4\frac{3}{4}$  grains of the drug, the sugar had fallen to 882 grains, and on the ninety-ninth day, when 7 grains of morphine daily had been reached, the sugar was reduced to a mere trace. It will thus be seen that a larger quantity of the drug had to be employed by the mouth on the second occasion than with the first experiment, viz., 7 grains instead of  $4\frac{3}{4}$ . The conclusions that Dr. Mitchell Bruce draws from these facts are (a) that in this case morphine is of value in the treatment of diabetes, and that in his opinion it has suffered somewhat unfairly in reputation by comparison with codeine; (b) that the glycosuria in this case was proved due to an increased income of sugar into the blood, not to diminished destruction of sugar in the system; (c) and that the increased income of sugar was proved not to originate in simple transportation of sugar from the intestine or portal vein to the general circulation, but that the excessive glycogenesis going on was effected mainly or entirely in the liver, not in the muscles or any other viscera; (d) and lastly since the effect of subcutaneous injection of the drug was so much less than when administered by the mouth, the inference is that if diabetes is of nervous origin, the seat of the disordered process is in the liver, not in the central nervous system or nerve trunks.

Dr. Mitchell Bruce, in this contribution, raises several interesting questions, of which, however, the value of morphine as a remedy for diabetes is the only one that can be considered here. To this I would remark that according to my observations diabetics have individual peculiarities respecting the effects of the different preparations of opium administered, and also that each case requires his own special dose of that drug, which has to be reached before its full effect on sugar excretion is attained. In some cases giving opium in a solid form has seemed to have more beneficial influence than in giving it in solution, probably because more benefit is derived by its slower and more continuous action on the portal circulation than when the drug is given in the liquid form. With other patients the crude preparations of opium often disagree; with these I have found morphine useful,



either in the form of pills or the ordinary solution. Solution of bi-meconate of morphia is a preparation which agrees with many diabetics. Nephenthe is also of considerable value in diabetes, for whilst it has proportionately a more powerful sugar-restraining effect than codeine, it has also the advantage over morphine or opium in not causing nausea, or headache, when equivalent doses are administered, probably owing to the blending of the various alkaloids and absence of meconic acid and resinous principles.

### **7. Opium and belladonna in diabetes.**

M. Villemin (*La France Méd.*, Paris, vol. i., 1887) records a case of acute diabetes in a young subject treated with belladonna and opium. At the time he was passing daily 23 pints of urine, with 841 grmes. of sugar. In seven days the quantity of urine fell to 16 pints and the sugar to 400 grmes. The doses were increased; the urine then fell to 7 pints and the sugar to 5 grmes. By the 28th the sugar had entirely disappeared. The treatment was suspended for 17 days, after which the sugar slowly reappeared. The treatment was resumed, and in seven days the sugar again disappeared. In fact, the symptoms were absent only so long as the drugs were used. During the treatment the restricted method of diet was employed. The doses of drugs were at first 1 grain each of the French extract of belladonna and of opium, gradually increased till 4 grains of each were used. Probably in this case the chief benefit was derived from the opium.

### **8. Jámbul in diabetes.**

Dr. Kingsbury (*Brit. Med. Journ.*, March 19, 1887) has tried powdered jámbul seeds in a case of diabetes in which the patient had been ill over four months, was greatly emaciated, and quite prostrate. He was suffering great thirst, ravenous appetite, and great restlessness. The urine had a specific gravity of 1040 to 1042, and from 7 to  $7\frac{1}{2}$  quarts were passed on an average in the 24 hours for a fortnight. At the end of that period the patient was able to get up and walk out for an hour at a time, was neither thirsty nor abnormally hungry, and was passing from 4 to 5 quarts of 1.020 specific gravity; he could sleep well, and felt strong. During the time he was taking jámbul his diet was not restricted in any way. Mr. H. Fenwick (*Lancet*, Oct. 8, 1887) mentions a case of 18 months' standing, who had lately been under strict diabetic regimen and treatment, applied for relief of rapidly sloughing ulcers of leg and thigh, which caused great pain. The patient stated that he filled a full-sized zinc pail with urine every night. In one week, with jámbul ( $2\frac{1}{2}$  grains) thrice daily, the urine diminished one-half, and the deepest ulcers had filled up and skinned over. Dr. R. Saundby (*Lancet*, Oct. 22, 1887) gives

his experience of the drug in five cases of diabetes, given in 5-grain doses generally four times a day. Though none of the cases were cured, all left the hospital more or less relieved by the treatment. All, however, were carefully dieted, and they were allowed potash imperial sweetened with glycerine, and were in several instances treated with vapour baths. The effects of the jámbúl were tested by maintaining uniformity of conditions in all other respects during the time the drug was employed or its use omitted. There were eight distinct trials in the five cases, five being followed by an increase of sugar and three by a decrease. Its disuse was followed on four occasions by a decrease and twice by an increase. In the "Year Book of Treatment" (p. 73) for 1884 attention was drawn to a communication of Mr. Banatvala in *London Medical Record*, p. 47, vol. i., 1883, to the beneficial effect of the powdered fruit stones of the *Syzygium jámbolum* in chronic cases of diabetes in doses of 5 grains. The plant is grown on the western hills of India, and differs in bearing fruit much smaller than the ordinary jamboo sold in the Bombay markets. The results so far obtained seem satisfactory—that is, like so many so-called specifics, it has a partial effect on the glycogenic function of the liver, perhaps from some alkaloid acting on the vaso-motor centre concerned in glycogenesis. No doubt, now that attention has been more fully drawn to it, observations will be made with a view of demonstrating its mode as well as its range of action.

### 9. Arsenic and lithium in diabetes.

Dr. Martineau (*Annales Méd. Chirg. Français et Étrang.*, Paris, vol. iii., pp. 87-93, 1887) proposes the employment of *arsenicated lithia water* in the treatment of diabetes, which he directs to be prepared by placing in the upper part of a Briet's apparatus for making aerated water 20 centigrammes of carbonate of lithium, and a tablespoonful of the following solution : arseniate of sodium, 20 centigrammes ; water, 500 grammes. This water is to be drunk at meals. Before commencing the treatment, in one case the urine was found to contain 60 grammes per litre of sugar, or 252 grammes in the twenty-four hours. In three weeks the daily excretion of sugar was 70 grammes, and in five weeks it had fallen to 16·5 grammes, whilst after two months and a half no sugar was found at all in the urine, and the secretion of urine had fallen as low as 35 oz. per diem. In this case the diet was only moderately restricted, and the patient lived four years after the arsenical treatment had been adopted, without sugar reappearing in the urine, dying eventually of uræmia, the result of chronic renal disease. Dr. Martineau also gives particulars of other cases in which arsenic and lithia apparently kept glycosuria in check for

many years. In all these cases arthritic symptoms, either in the form renal or hepatic lithiasis, or articular symptoms, or of cutaneous symptoms were present. In three other cases in which the lithia and arsenic treatment failed no arthritism was present, but herpetic symptoms existed in the form of neurotic tendencies. Dr. Martineau believes the good effect of this treatment in suitable cases is due to the action of the lithium upon the glycogenic function, and by aiding the conversion of glucose into carbonic acid and water. Dr. Martineau claims to have cured sixty-seven cases out of seventy of arthritic cases of diabetes by this method. Dr. Austin Flint (*Medical News*, vol. li., Phil., 1887), attracted by the simplicity of the remedy, determined to test its efficacy in certain cases of obstinate diabetes, and his conclusions may be thus briefly summarised : In three very severe cases in which the solution of lithium carbonate and sodium arseniate in carbonic acid was used no marked result followed during the few weeks it was tried. Though he is of opinion that the treatment seems worthy of a more extended trial, as it may prove useful in mitigating the severity of a strict anti-diabetic diet. Dr. Flint thinks the so-called specifics for diabetes have little or any effect ; an exception, however, may be made in favour of arsenite of bromine, which, in Dr. Flint's hands, has sometimes seemed to have controlled to a slight extent the thirst, the polyuria, and discharge of sugar. Dr. Vigiers (*Therap. Gaz.*, August, 1887) proposes the following formula for a pill, to be given instead of the lithia arsenical solution : lithium carb. g. iss. ; sodium arsenitis, gr.  $\frac{1}{25}$  ; extract gent. g.  $\frac{3}{4}$ , to make one pill to be taken night and morning. Dr. Crittenden (*Virginia Med. Monthly*, vol. xiv., Richmond, 1887) speaks favourably of the *arsenite of bromine* in diabetes. As stated above, it is the only one of the so-called specifics that Dr. Austin Flint has sometimes found to have, to a slight extent, a controlling influence on the disease. In the "Year-Book" for 1886 (p. 64) we mentioned that its best effects were generally to be observed in acute or neurotic cases, less so in the chronic and constitutional.

### 10. Diet in diabetes.

Dr. Coiquard (*L'Union Médicale*, 20 Nov., 1886) never advises the employment of gluten bread, but directs the patient instead to make use of potatoes, either boiled or *en purée*. Till he commenced this practice, six years since, he was not acquainted with the fact that potatoes boiled or mashed contained less sugar-yielding material than the gluten bread of commerce. Besides this there was the fact of the repugnance of the patient and the inappetence that a gluten diet causes to encourage him to take



this step. He therefore advises the use of potatoes, but instructs the patient to eat as little of them as possible, and has obtained results as favourable as when he gave gluten bread, besides the immense advantage of preserving the appetite.

**Dr. Dujardin Beaumetz** (*Bull. Gén. de Thérap.*, Paris, cxi., 385, 1886), after reviewing the various suggestions made from time to time with regard to the best dietetic arrangements for diabetics, gives a table showing the proportion of starch, dextrine, and analogues in 100 parts in certain vegetable products. Thus gluten biscuit contains 40·2, vermicelli 76·4, baker's bread (of Paris) 56·3, peas 55·7, potatoes 23·3 per cent. In another table he gives the percentage of sugar obtained from the crust of ordinary bread, its crumb, from gluten bread, and from potatoes; thus

100 grammes of crust of ordinary bread yields	76 grammes of sugar
„ „ of crumb of ordinary bread	52 „ „
„ „ of gluten bread	18 „ „
„ „ of good potatoes	17 „ „

He would therefore stop the administration of the gluten bread, and replace it by potatoes, since of all feculants the potato contains the least starch, and consequently yields the least sugar.

The observations of Drs. Beaumetz and Coiquard are of importance in drawing attention to the fact that gluten bread does contain a percentage of starch, which at times, if the flour is not carefully prepared, may be considerable. The medical attendant should therefore from time to time carefully determine the amount of starch present in samples of gluten bread consumed by his patient.

With regard to the propriety of giving potatoes in lieu of gluten bread, I am, however, extremely doubtful. Even if the percentage quantity of starch is less, still in cooked potatoes it is in such a soluble form that it is rapidly converted into glucose, and passes, as it were, immediately into the portal circulation.

A patient of mine, with mild diabetes, finds he is more tolerant of baker's bread than of a smaller quantity by weight of potatoes. Another patient pointed out a fact which I have repeatedly confirmed since, that if he ate a certain quantity of stale bread an increase of sugar was immediately apparent in his urine, whilst an equal quantity of new bread, hot from the oven, had no evident effect, his explanation being that in the dry state the starch in the bread was more readily acted on by the secretions, and passed rapidly into the circulation, giving rise to an immediate increase in the amount of sugar, whereas the clammy new bread was less rapidly acted on, and was brought only in increments to

the portal circulation in amounts that did not disturb the glycogenic functions.

With boiled potatoes and mashed, the starch is rendered very soluble by boiling with water, and therefore more easily acted on by the salivary and pancreatic ferments.

### 11. Diuresis.

Professor Munk (*Centralbl. f. die med. Wiss.*, 27, 1886), in investigations on the diuretic action of certain drugs, first determined experimentally the nature of the urinary secretion when free from the action of the nervous system, by removing the kidney of a dog and passing through it a stream of defibrinated blood under definite pressure. Secretion took place at the rate of from 4 to 24 cc. an hour. The addition of certain drugs, as caffeine, dextrose, chloride of sodium, and nitrates of potassium and sodium caused at once an acceleration in the flow amounting from three to fifteen times, although the pressure remained the same. The increased secretion is not merely hydruric, but it is evidently brought about by the action of the substances on the renal cells.

With regard to the action of alkaloids, quinine increases the secretion, morphia diminishes it, whilst strychnine and atropine have no action. Professor Munk also succeeded in producing synthetically hippuric acid, by mixing benzoic acid and glycocoll with the circulating fluid, thus 1 grme. of sodium benzoate and 0.5 grme. glycocoll produced, after four hours, .107 grme. of hippuric acid. This experiment goes far to support Dr. Latham's hypothesis of the formation of uric acid in the kidney circulation by the synthesis of hydantoin and bi-uret.

### 12. Enuresis.

Dr. Steavenson (*Brit. Med. Journ.*, Nov., 1887) has obtained excellent results by the treatment of the various disorders of micturition by electricity. As the lowest centres for the genito-urinary apparatus are situated in the lumbar enlargement of the cord, by placing one electrode on the spine over the lower dorsal region, and the other to the affected organ, the nervous supply of all the parts can be included in the circuit. A pad, for instance, connected with the negative pole of the battery placed over the dorsal region of the spinal column, and a small positive electrode in the perinæum, and a weak current passed, often cures cases of nocturnal incontinence in children when not due to reflex causes. In cases of simple incontinence of urine, when the sphincter is not at fault, and when due to loss of power of inhibition, or paralysis of the muscular coats of the bladder, then the electrode should be placed over the pubes. When, however, there is weakness of the

sphincter, the best place for the electrode is on the perinæum. In cystitis giving rise to frequent micturition, the passage of the electric current improves the condition of the bladder walls, and thus renders micturition less frequent.

### 13. Renal calculus.

Dr. J. Tyson (*Boston Med. and Surg. Journ.*, vol. cxv., No. 16) points out in a clinical lecture the beneficial results obtained by a pure milk diet in the treatment of uric acid gravel and calculus. The milk acts as a diluent and as an alkaline solvent. In carrying out the treatment he recommends a glass of skim-milk to be taken every two hours during the first day. After this it is increased day by day till the quantity necessary to sustain the patient is reached. This treatment, though it has some effect, is not so useful when the gravel or stone is composed of phosphates.

Dr. E. Philbert (*Journ. de Méd. de Paris*, vol. xi., pp. 22, 695), who himself suffers from renal colic, speaks highly of the effects of oil of sandal wood in two of his last attacks. When the premonitory pains came on he at once took four capsules containing the oil, and had a warm bath. The attack was much less severe than usual, and its duration shorter, whilst he had no further attack for six months. This he treated in a similar manner, and then had only a momentary shooting pain in the ureter.

Dr. Ralfe (*Medical Soc. Trans.*, p. 301, 1887) observes that, in the treatment of a retained renal calculus, his object is not to act chemically on the stone, but to check its growth, by rendering the urine neutral and lowering its specific gravity, and, above all, to diminish the pyelitis. Sufficient attention has not been paid to the great obstruction the swollen mucous membrane of the pelvis of the kidney offers to the passage of a stone otherwise small enough to pass through them. The treatment consists in the use of distilled water, or filtered rain-water (4 to 5 pints per diem), for all drinking purposes—tea, coffee, &c.—together with the systematic employment of turpentine in 10 min. doses three times a day; and if the urine is acid, then benzoate of lithia may be given. The distilled water and the turpentine both act as a diuretic, and relieve the pyelitis. Dr. Ralfe does not advise the urine being rendered alkaline, since alkaline urine, causing deposition of phosphate of lime, causes considerable irritation of the mucous surface, and increases the tendency to pyelitis. As soon as the urine clears and the specific gravity falls, we must be prepared for the final expulsive action, which is much aided by the frequent administration of warm enemata, in addition to the usual remedies—warm bath, opium, &c. This general method of treatment is most successful under the following conditions:—(a) When we have



reason to suppose that the concretion has been recently formed and is still small, and is retained chiefly by the swollen condition of the mucous membrane of the pelvis of the kidney obstructing the ureter. It is, therefore, especially indicated when the colic is attended with much hæmorrhage and pus in the urine. (b) It should be employed in those cases of recurrent pisiform calculi so common with elderly people, in whom small concretions are passed, often with intervals of only a few months between, in sizes varying from a hemp seed to that of a small pea. After taking the remedies some time the size of the concretion diminishes, and in some instances their formation has been checked altogether. (c) It may be advantageously administered in cases in which, from obesity, or from broken health of the patient, nephrotomy is not advisable. In these cases we may hope that the long continued action of the distilled water may lead to the disintegration of the calculus ; whilst the turpentine, combined with alkaline bases or acids, as the reaction of the urine may indicate, undoubtedly diminishes existing pyelitis and renders the attacks of colic less severe and less frequent.

# RHEUMATISM AND GOUT.

BY ROBERT MAGUIRE, M.D., M.R.C.P.,

*Physician to Out-Patients and Joint Lecturer on Pathology, St. Marj's Hospital.*

---

## **1. The salicyl treatment of rheumatism.**

Dr. Carter, of Birmingham (*Brit. Med. Journ.*, vol. i., p. 1380, 1887), in order to discuss the effects of the salicyl compounds on rheumatism, first reviews the different theories held as to the nature of the disease, and states his adherence to what he terms the neuro-humeral view—namely, that under the influence of cold, operating through the medium of the nervous system, a disturbance occurs in the metabolism of the tissues, leading to the formation and accumulation in the blood of abnormal substances, upon which the outward manifestations of the disease depend. Dr. Latham has explained that glycocine is the most important of these abnormal substances, and this, Dr. Carter believes, is correct in principle, as far as it can be tested by clinical observation.

Dr. Carter further shows that (1) the joint-affection is merely an incident in the rheumatic disorder which might conceivably be wanting altogether without vitiating the nature and reality of the rheumatic process ; (2) that it is secondary in its origin ; and (3) that the changes which take place in the joint-structure have no special feature which serves to distinguish them from any other kind of simple arthritis. Anæmia is another consequence of the presence of poison in the blood, since this destroys the red blood corpuscles.

The salicyl compounds may produce their effects (1) by directly allaying the joint-inflammation ; (2) by attacking the root of the rheumatic process ; and (3) by in some way neutralising the chemical irritation of the joint. Seeing, however, that they have no effect on arthritis of other than rheumatic origin, and that, although they relieve the pain and reduce the fever, the symptoms return when the drug is suspended, the first two views appear to be negatived.

It therefore appears probable that these remedies operate by checking the outward manifestations rather than by curing the disease, and Dr. Carter holds the view that the salicylates act by neutralising and preventing the chemical irritation of the joint.

In order to make use of the remedies in the most favourable manner, they must be given freely and at short intervals. Dr. Carter recommends that to a young adult not less than 20 grains should be given, at intervals not exceeding three hours; but that, as the symptoms yield, the quantity should be gradually diminished. Severe, deep-seated inflammatory changes may have taken place before the salicylates are given; and these the drug cannot cure, although it may prevent further change. Hence the treatment is of little avail in sub-acute and chronic rheumatism, and is of most use in the early stages. Relapses occur because the drug is suspended before the possibility of further symptoms arising is disposed of, and hence the treatment should be continued, in reduced doses, for at least three weeks from the date of onset. In debilitated subjects the rheumatic process is prone to continue longer than in others. In these subjects the salicylate treatment is unsatisfactory, because either the drug is suspended before the rheumatic process is over (in which case relapses will certainly occur), or it is continued so long as to depress the vitality of the patient, and make it impossible for him to throw off the disorder. Dr. Carter further is of opinion that heart-complications are controlled by the salicylates in the same way as the joint-affections, and that when such complications occur during the first day of treatment the inflammation has probably begun before the patient came under observation.

To obtain the full benefit of the salicylate treatment, the preparations must be given more freely even than Dr. Carter suggests. The bowels should first be well opened, and then the salicylate given in 20 or 25 grain doses hourly for four hours, and afterwards in a similar dose every three or four hours. Dr. Maclagan would recommend larger doses still, but those mentioned will generally be found sufficient. As pointed out in the "Year-Book" for 1886, relief must not be mistaken for cure. This error is very fruitful of so-called relapses. In the event of heart or lung complications arising, the salicylates require great care in their administration if collapse is to be avoided.

**Dr. Otho R. Travers** (*Brit. Med. Journ.*, vol. i., p. 491, 1887) recommends the salicylate of potash, instead of that of soda, in the treatment of rheumatic affections.

In further letters upon this subject various observers have similarly recommended the potash salt.



**Dr. Donovan** (*Brit. Med. Journ.*, vol. i., p. 809, 1887) obtains the best effects with a mixture of equal parts of bicarbonate of potash and carbonate of ammonia, neutralised by salicylic acid.

## 2. Salol in rheumatism.

This combination of salicylic and carbolic acids (of which a brief notice was given in the "Year-Book" for 1886, p. 71) has been further investigated during the year. The most important paper upon the subject was read before the Berlin Medical Society by **Herrlich** (*Deutsch. med. Woch.*, p. 398, 1887), and related observations upon cases in Leyden's *clinique*. In all, the drug was tried upon thirty cases, some of typically acute articular rheumatism, others chronic articular rheumatism, muscle rheumatism, lumbago, and omalgia. The acute articular rheumatism rapidly yielded to the salol, but the chronic muscular rheumatisms also were relieved or cured by the treatment. The drug was given in the form of powder in daily quantities of 90 to 120 grains.

**Bielschowski** (*Therap. Monatsh.*, p. 47, 1887), from his experience of salol in the Breslau Hospital, concludes that it is a specific in acute articular rheumatism. The observations were made upon twenty-seven cases, of which nineteen were quickly cured; two cases were not much influenced by salol, but were rapidly relieved by salicylate of soda administered by the rectum; the remaining cases, in spite of treatment, lapsed into the chronic state. Relapses were seen in eight cases, but the symptoms disappeared rapidly under renewed treatment with salol in diminished doses. The drug was given in capsules, at the rate of 75 grains a day. The smallest amount taken before the symptoms were relieved was 195 grains; and the highest, 660 grains. In four cases slight affection of the force of the heart was noticed, but disappeared when the drug was stopped.

**Kleefeld**, of Görlitz (*Berl. klin. Woch.*, Jan. 24, 1887), has used salol in the treatment of thirty-five cases of rheumatism and neuralgia, with the best results, and with no ill-effects. Large doses, 30 grains three times daily, were rarely given, as good effects were obtained from 15 grains.

**Rosenberg** (*Therap. Monatsh.*, p. 51, 1887) records his observations in the Jewish Hospital at Berlin. He has not found the results to be so favourable as other observations would lead one to suppose. The cases yielded promptly to doses of 90 to 120 grains per day, but relapses and complications were frequent. In one case no effect was produced by salol, but salicylate of soda gave quick relief. He found that unpleasant symptoms, such as vomiting, nausea, and singing in the ears, were often met with, and sometimes were very severe.

**Fränkel** (*Deutsch. med. Woch.*, No. 43, 1886) also has not found salol to be as effective as other remedies in the treatment of acute rheumatism.

**Georgi** (*Berl. klin. Wochenschr.*, Nos. 9 and 11, 1887) has employed salol in various affections, and found that it acted beneficially in acute rheumatism, as in other febrile ailments; but it also had an influence in relieving the pain. In one case of sciatica he obtained a favourable result.

**Herrlich** observed that salol was more powerful than salicylic acid in relieving rheumatism, 10 grammes of salol having more effect than the 6 grammes of salicylic acid contained in it. The question then arises whether the carbolic acid contained in the salol has any effect upon the rheumatism. **Sahli** considers that it has, and **Herrlich** is inclined to the same opinion; but **Kunze** and **Senator**, in earlier researches, have shown that subcutaneous injections of carbolic acid have no effect upon the rheumatic process. Under the influence of salol the system becomes rapidly carbolised, if one may judge by the condition of the urine. It rapidly becomes darkened in colour, even after small doses of the drug; but **Herrlich** finds that, in spite of the condition of the urine, symptoms of carbolic-acid poisoning do not ensue upon the internal use of salol when given as described above.

I can confirm the observations mentioned above, as to the darkening of the urine after administration of even small doses of salol. It is to be remembered, however, that none of the observers have given such doses of salol as we are accustomed to give of salicylic acid in following out the treatment recommended by **Maclagan**. **Herrlich**, it is true, finds that salol has a more powerful anti-rheumatic effect than the amount of salicylic acid contained in it; but this is not confirmed by other observers. If, therefore, we were to give salol for the sake only of the salicylic acid it contains, and were to prefer this preparation because it does not produce the gastro-intestinal disturbance occasionally brought about by the salicylates, we should be compelled to give at the same time a colossal dose of carbolic acid. Thus, an amount of salol corresponding to 20 grains of salicylic acid would contain nearly 13 grains of carbolic acid; and it would be a matter of surprise if this, repeated hourly (as is, I believe, desirable when administering salicylates in the early stages of acute rheumatism), did not produce symptoms of carbolic-acid poisoning. In cases, however, where only small doses of salicylic acid are required and not often repeated, salol will be found a more agreeable substitute.

**Naphtalol**.—**Robert** (*Therap. Monatsh.*, May, 1887) has investigated a substance, naphtalol or naphtol-salol, prepared by

Merck, which is an ether compound, like salol, but contains  $\beta$ . naphthol in place of phenol. It is much less harmful than salol, is much better borne, and is said to act better than phenol salol in acute articular rheumatism. At present, however, it has been but little investigated.

### 3. Antipyrin in rheumatism.

Fraenkel (*Deutsch. med. Woch.*, Nos. 43 and 44, 1886), from an observation of more than thirty cases of acute rheumatism, comes to the following conclusions:—

1. That antipyrin is a useful addition to our means of treating acute rheumatism.

2. That it may be recommended as an initial treatment in acute rheumatism.

3. That it does not prevent relapses, and is not an absolute substitute for salicylic acid and its preparations.

Fraenkel gives the drug, in peppermint water, in three-hourly doses, amounting to 75 grains the day as a maximum dose, diminished as the severity of the disease decreases. Only seldom did any unpleasant symptoms arise.

Clément (*Lyon. Med.*, No. 35, 1886) has substituted antipyrin for salicylate of soda in all cases of acute and sub-acute rheumatism, with good effect. He specially points out that when the rheumatism was complicated in any way, the antipyrin gave rise to no unpleasant symptoms, and no signs of weakness of the heart appeared. In chronic and gonorrhœal rheumatism there was no effect from the use of the drug. Two cases of gouty arthritis did well under this treatment.

Davis, of Chicago (*Journal of Am. Med. Assoc.*, p. 13, 1887) has also investigated this treatment in about twenty cases, and finds that it is of most avail in acute cases, or in chronic cases where there is an acute exacerbation. In chronic cases without fever, no effect was noticed. Antipyrin is said to have the advantage over the salicylates of being less liable to provoke nausea, headache, and noises in the ears, and may be of special use when a patient cannot take salicylates. It can also be given efficiently by the rectum, or subcutaneously if desired. The only ill-effect caused by the treatment is the production of the antipyrin rash, for Dr. Davis considers that the collapse which has occasionally appeared was possibly not due to the antipyrin. He believes that its power of allaying pain in rheumatic fever is due to a direct action upon the nervous structures.

### 4. Antifebrin in rheumatism.

This antipyretic also has been made use of in acute rheumatism. Eisenhart (*München. med. Woch.*, No. 24, 1887) has



employed it in thirty-four cases of acute articular rheumatism, and considers that it is no less useful than antipyrin. He gave the drug as a powder, in four-grain doses, six or eight times a day for the first three days; then he allowed one day's interval, and resumed the treatment in smaller doses. The resumption of the drug was usually considered a prophylactic measure against relapses. The drug fails to relieve the disease in some instances, but, nevertheless, in the majority of cases, it is said, proved to be a useful remedy.

### **5. Gonorrhœal rheumatism.**

Taylor (*Journ. of Cut. and Gen. Urin. Diseases*, p. 276, 1887) reports twenty cases of gonorrhœal rheumatism occurring in the Charity Hospital of New York, in which he had given a thorough trial to the oil of winter-green. Nine cases were so chronic as to offer little hope for any kind of treatment, but in other cases the benefit was most marked, and most recovered in some weeks. The drug was given in capsules in large doses, varying according to circumstances. The oil had also a beneficial effect upon the urethral affection. Taylor believes that the remedy is of most value in early cases, before the structural changes have taken place. It relieves the pain, and, he thinks, does not cause a burning, unpleasant sensation in the urethra and perinæum, complained of sometimes when iodide of potassium and salicylic acid are administered.

Fränkel (*Charité Annalen*, vol. xi., p. 182) describes a case of gonorrhœal rheumatism in which the disease was extremely widely spread over the body. The patient, after a gonorrhœa which lasted eight days, and was cured by injections, began to suffer from pain in the hip-joint and afterwards in the knees. Various other joints became affected afterwards, and at the same time there was somewhat high and continuous fever; so that the case assumed the character of acute general rheumatism. There also appeared pain in the sciatic nerve and teno-synovitis, which symptoms are not usually met with in gonorrhœal rheumatism. Antipyrin, iodide of potassium, salicylic acid, were all useless in curing the disease; but salicylic acid seemed to have some little power of relieving the pain, and certainly assisted in lowering the temperature.

### **6. Chronic articular rheumatism.**

Ziemssen (*Therap. Monatsk.*, p. 382, 1887), speaking at Wiesbaden, stated that the baths and waters at that place were an important help to a cure, but no more. The treatment he has found most efficacious is based upon the following principles:—

1. Chronic articular rheumatism is a general constitutional

disease. If it be local for a time, it may rapidly fly to other joints, or become generalised. There is a general "materia peccans" at the root of the disease, whether this be a bacillus or any other offending agent.

2. The treatment must, therefore, be general.

3. The disease may be of such old standing in certain parts (and this is the rule) that the general treatment is not sufficient, and hence, to hasten the cure, simultaneous local treatment is desirable.

4. In the affected joints there are nearly always to be found circumscribed points very tender to the touch.

5. Chronic articular rheumatism is often complicated. There may still be present the remains of the disease which caused the rheumatism, such as gout, gonorrhœa, syphilis, or the effects of injury. Again, the rheumatic poison may at the same time show itself in parts other than the joints, as, for instance, in the form of muscle-rheumatism, neuralgias, sciatica, heart-affections, etc.

6. Such complications must be treated at the same time as the joint-affections.

7. The treatment must not be suspended until the last remains of the disease have disappeared. The so-called rheumatic diathesis is nothing else than the uncured disease.

The treatment recommended on these principles is the following:

*General treatment.*—The patient must first be placed upon a regulated and simple regimen, which is to be adapted to the individual case. Weak and thin patients require a stimulating and nourishing diet, stout and plethoric patients a reducing diet, so that the food taken shall be in correct relation to the needs of the body. Beer is forbidden entirely, for Ziemssen is of opinion that it hinders the rapid absorption of rheumatic products. Wine is to be limited. Change of air is necessary, in order to favour food-metamorphosis. As regards the Wiesbaden climate, Ziemssen thinks that patients are better there during the summer months; and the opinion to the contrary, which many hold, is due to the consumption of Rhein wine by the patients during the summer. In the warm weather the skin functions are regularly performed day and night. Ziemssen doubts if thermal waters have any direct influence upon the disease, or whether they do not rather stimulate the skin action. Rheumatic patients are better for the use of indifferent thermal waters, or even of dry heat. The baths are of use as accessories, and it is better to live in the bath-house, so as to avoid changes of temperature in passing from the bath to the bed.

Woollen underclothing must be worn, and changed frequently.

The above general principles are, as Ziemssen points out, suitable for all chronic ailments. The special treatment he recommends is the use of salicylate of soda, in doses of 75 to 105 grains daily, and given best in one dose (!), like quinine in malaria. After trying all the newer remedies, Ziemssen finds that salicylate of soda is decidedly the best, and is exceedingly well borne when dissolved in the Wiesbaden water. He knows of no contra-indications for its use, and, if it fails in a case of chronic rheumatism, he suspects that some complication has been overlooked, or that the diagnosis was erroneous.

*Local treatment.*—The author has found of the most avail massage with the warm douche in the warm bath. All other remedies, such as blisters, hot iron, iodine, etc., he has placed upon one side. Even in pseudo-ankylosis, where formerly he used to break down the adhesions under chloroform, he now finds that massage and the warm douche, delivered at a pressure of seven atmospheres, is quite sufficient to cause the adhesions to disappear. Rheumatic affections of muscles and nerves, and also sciatica, may be so treated.

The author comments upon the fact that he recommends no new remedies, but he insists strongly that the old remedies mentioned above shall be carefully combined. Especially should general be combined with the local treatment.

### 7. Sciatica.

Metcalfe (*Boston Med. and Surg. Journ.*, p. 87, 1887) recommends in sciatica the prescription of a French doctor in Cuba. He has had tablets made, each of which contains three drops of the following mixture:—

R   Tinct. Aconiti.  
       Tinct. Colchici. Semin.  
       Tinct. Belladonn.  
       Tinct. Actææ. Racemos.  
       Equal parts by volume.

One tablet may be given every four, six, or eight hours, according to the necessity of the case.

Schweninger (*Charité Annalen*, vol. xi., 1886) has used ichthyol in 10 per cent. to 50 per cent. solutions, in rheumatism, lumbago, and sciatica, and has found that it allays the pain of these diseases better than any other known remedy. He applies it locally, and also gives it internally in capsules.

### 8. Arsenic in the Bath waters.

Reasoning that since Bath waters cure rheumatism, they must contain one or more of the ordinary remedies for rheumatism,



**Lowe** (*Lancet*, vol. i., p. 100, 1887) examined them carefully, and found in them minute traces of arsenic. The Bath waters precipitate an iron salt on standing for some time, but not for several hours after the carbonic acid has all escaped. This Lowe believes to be explicable by the presence of arsenic in the waters.

### **9. Therapeutics of the uric-acid diathesis.**

**Dr. Burney Yeo** opened a discussion upon this subject at the Dublin meeting of the British Medical Association, of which an abstract appeared in the *Lancet*, vol. ii., p. 320, 1887. Dr. Yeo defined the uric-acid diathesis as mainly a disturbed retrograde metamorphosis, and considered, after reviewing the various views held as to its pathology, that one thing was certain—that the uric-acid diathesis had its foundation in the imperfect metabolism of food, especially albuminoids.

Next to heredity there can be no doubt that errors in eating and drinking were the most potent causes of the uric-acid diathesis, but it is an error to suppose that all gouty people had been intemperate. Dr. Yeo thought that no good results followed from prohibiting the moderate use of animal food. With regard to alcohol, he considered that it would be better for some persons, especially women, to refrain entirely, but in others a moderate use of alcohol was not objectionable. Malt liquors and bad wines, especially cheap clarets, were to be carefully avoided. The quality, rather than the kind, of wine was the most important point, and, as a general rule, the best wines were those which had a diuretic action. Alkaline water might advantageously be added to the wine. Moderate exercise and a warm, dry, equable climate were desirable. Dr. Yeo advised the regular use of considerable quantities of water, preferably hot water. With regard to drugs, he had never seen the ill-effects from colchicum attributed by some authorities to its use. He believed that its chief action was on the liver, but it had also sometimes a diuretic and diaphoretic action. He disagreed with Germain Sée that salicylate of soda was the best remedy we possessed, and he had not been convinced of the value of the benzoates. Iodide of potassium was useful. Alkalis were in almost universal favour, but he considered that at present there was a disposition to unduly exalt the merits of lithium in comparison with soda and potash. Bicarbonate of potash, he thought, was the most diuretic of the group. He believed that the success attending the use of Contrèxéville waters, which contain a large amount of magnesia and lime, should direct our attention to these salts as remedies. He thought that Bath was likely to be as useful as Contrèxéville, and it was a much

more attractive place; while, moreover, the mineral constituents of the waters were similar.

#### 10. Colchicum in gout.

Dr. A. H. Carter (*Birm. Med. Journ.*, p. 160, 1887) asserts that colchicum is not able to limit or control the formation of the materies morbi of gout, but only attacks the symptoms and reduces the inflammation of the joints. He believes that it produces its effects by reason of its action as a vascular depressant, for he has satisfied himself that other remedies having a similar action (such as nitro-glycerine, nitrite of amyl, and nitrite of sodium) will also give relief to the pains of acute gout. The drug is far less applicable in chronic than in acute gout, because the relief it affords is in inverse proportion to the amount of local inflammatory mischief. Dr. Carter further remarks that when other forms of inflammation are found to present the same conditions as obtain in the gouty joint, colchicum will be found to relieve them as well as it does those of gout. The increased liability to recurrence of attacks after the use of colchicum would be explained by Dr. Carter on the ground that, as a vascular depressant, it leaves behind an amount of prostration and want of tone which disturb metabolism, and so increase the gouty tendency.

The practical conclusions arrived at in the paper are: that the use of colchicum should be confined to early attacks of a sthenic type, where the pulse is of distinctly high tension; and that it should be avoided in all cases attended with debility and cardiac feebleness. Its administration should not be continued for a longer period than is absolutely necessary for the relief of pain. Since there is no evidence to show that colchicum has any curative influence, but tends to encourage recurrence, it is safer to avoid its use when possible.

The practical points in the paper quoted are excellent, but the theoretical remarks are lacking in a basis of fact. We have no reason to suppose that the actual process of inflammation in the gouty joint differs *quoad* vascular congestion from that of other forms of arthritis, yet it is certain that colchicum has by no means the effect on other inflammations that it has on those of gout. For some unexplained reason colchicum has a specific action in relieving gouty pain, whatever be its effects upon the gouty process. In the face of clinical experience, it is hard to believe that the gouty process is not influenced by it. The absolute determination of the amount of uric acid excreted under the influence of colchicum is not a sufficient guide to a correct judgment as to its action. As suggested by Dr. Burney Yeo in a

paper mentioned above, it may act upon the liver and attack the gouty process by setting right the metabolism of the body. However this may be, I am inclined to believe that the depressant effect of colchicum upon the vascular system is a side-action, which it is in some cases allowable to risk in order to obtain the other beneficial effects of colchicum in relieving pain; but that, when once we have succeeded in this object, the colchicum should give place to other remedies for the gouty process which have no such deleterious action.

#### **11. Gouty parotitis and gouty orchitis.**

Debout d'Estrées, of Contrèxéville (*Med. Chir. Trans.*, vol. lxx., p. 217), describes a form of gout in which the attacks have their seat in the glands and in the joints alternately. In the first case mentioned the attack began invariably in one of the parotids, rapidly invading the knee of the opposite side, and then successively the other parotid and the other knee. In the second case a patient who had suffered from gout and gravel for upwards of twenty years was attacked with inflammation of the right wrist and of the parotid gland of the same side. A similar alternation of parts is observed in the case of the gouty orchitis, for in the various observations published the left testicle and the right foot have equally been attacked, although this arrangement is not invariable. It is important to recognise the nature of these disorders when they occur, as the true treatment is determined by the diagnosis.



# ANÆMIA AND ALLIED CONDITIONS.

BY SIDNEY COUPLAND, M.D., F.R.C.P.,

*Physician to the Middlesex Hospital.*

---

## 1. Recent literature.

During the past year there have been comparatively few additions to our knowledge upon the nature and treatment of diseases in which the blood is apparently primarily at fault. Even to systematic works on medicine there has been no material accession. Dr. Frederick P. Henry, of Philadelphia, has collected within the compass of a small volume his articles on *Anæmia*, which appeared in the *Polyclinic*. The work is eminently readable, and presents a very clear idea of the present position of the subject, the various forms of anæmia being classified under the heads of 1. Primary; 2. Secondary; 3. Toxic; and 4. Parasitic. At the same time it is evident that as regards treatment there is very little new to be said. This subject has also been dealt with by Dr. Osler (*Therap. Gaz.*, Nov., 1886), whose contributions to Pepper's "System of Medicine" were noticed in the "Year-Book" for 1885; and Dr. J. King Crook (*New York Med. Record*, June 11, 1887) contributes an interesting paper entitled "A Study of Chlorotic Anæmia."

## 2. Beri-beri.

The remarkable disease, or rather congeries of diseases, which goes under the name "beri-beri," has received a considerable amount of attention of late years. Anæmia may be said to be its most prominent symptom, and doubtless many other of the symptoms, such as anasarca, palpitation, cardio-vascular bruits, are directly referable to the impoverished blood state. At the same time there are cases in which cutaneous anæsthesia, muscular hyperæsthesia and paralysis, tenderness over nerve-trunks, suggestive of multiple neuritis, predominate, so that there seems every probability that we have to do with more than one disease, occurring from more than one cause, and therefore requiring more than one appropriate method of treatment. At present we find observers roughly grouping the examples of beri-beri under three heads: viz., the wet or dropsical form, characterised by general

dropsical effusions ; the dry or atrophic form, where there is a wholly opposite condition ; and a mixed form in which the essential characters of the other two varieties intermingle. It is not therefore to be wondered at that various etiological explanations have been proffered ; and since beri-beri favours mostly the low-lying seaboard of tropical countries, and occurs endemically as well as epidemically, its dependence upon a specific virus, allied to malaria, has received the chief support. But there is also little doubt that many causes predispose to the malady, notably improper feeding and hygiene. Besides, it is far more common in males than in females, and in the adult rather than at any other period of life. The importance of a more definite knowledge of the affection to the health of our colonies is great ; for in some countries, as Ceylon, it is responsible for a large amount of sickness and for a heightened death-rate.

One of the most instructive and detailed inquiries into the subject is that by **Surg.-General Takaki** in his articles upon *Kakké*, as the disease beri-beri is known in Japan (*Sei-I-Kwai Med. Journ.*, abstr. in *Lancet*, July, 1887), who arrived at the conclusion that, at least in that country, the disease may be accounted for by the relative deficiency in nitrogenous elements in the dietary of the natives as compared with Europeans. He gives abundant statistics, drawn mainly from the records of the Japanese navy, which point to the above conclusion, and show also the very remarkable decrease in sickness from this cause since the adoption in 1884 of new dietetic rules for the naval force. Thus, from the years 1878 to 1883 the percentage ratio of kakké cases was 32·79 ; from 1884 to 1886 it was only 4·45 ; the mortality in the former period was 2·63 ; in the latter, 0·37, falling in the last two years to zero. These are striking figures, and they are supplemented by further statistics, showing a similar improvement in other diseases treated in hospital since the dietetic reform. On this view, then, kakké or beri-beri would be allied with scurvy rather than with malarial affections. At the same time it is quite possible that a defective diet may be a predisposing cause only ; for it is remarkable that the disease is largely endemic, and that Europeans, at least in India, may suffer equally with natives when dwelling in a district where beri-beri is rife. In support of the malarial hypothesis may be mentioned the alleged discovery by Dr. Wallace Taylor, of Osaka, of a spirillum in the blood and urine of kakké patients, in the soil and water of infected districts, and in food ; and the like discovery by Dr. Ogata, of Tokio University, of a specific bacterium.

All these inquiries, however, seem to pale in interest before

that carried on by **Dr. Kynsey** on behalf of the Indian government with reference to beri-beri in Ceylon, the country which has always been the favoured centre of the disease ("Report on Anæmia, or Beri-beri of Ceylon," by W. R. Kynsey, Principal Civil Med. Off. and Inspector-Gen. of Hospitals, Ceylon. Colombo, 1887). Space does not permit a full analysis of Dr. Kynsey's statements, but it may suffice to give his conclusions. These amount to the declaration that the "wet" or "dropsical" form of beri-beri, or the beri-beri of Ceylon, depends on the presence of *anchylostoma duodenale* in the intestinal canal—is in fact *anchylostomiasis*. It appears that the paralytic form is unknown in Ceylon, although weakness, feebleness, and numbness may occur in some cases. The disease may be acute or chronic, and death may be very sudden; the severity of symptoms depending upon the number of parasites present in the intestines, the state of health, and the food. To acquire the disease, residence in an infected centre is needed; the ingestion of the parasitic larva through drinking water contaminated with excreta of infected subjects being undoubtedly the source. The treatment would consist in the expulsion of the *anchylostoma* by thymol, but it is essential that the patient should withdraw from the infected area, and not return to it. Until the parasites are expelled, no treatment avails, but then iron, followed by digitalis, or strophanthus, are useful in combating the anæmia. [Appended to Dr. Kynsey's report is a full translation of Dr. Lutz's monograph on *anchylostomiasis*, referred to in the last "Year-Book," and decidedly the most complete study of the subject published.]

Other writings on beri-beri during the past year are, a long series of articles by **Dr. Karl Wintraub**, based on his experience in the East Indian archipelago (*Wiener med. Woch.*, Nos. 23 to 44, 1887), in which the various etiological doctrines are discussed; a report by **Drs. Pekelharing** and **Winkler**, of Utrecht, mainly from observations in Batavia, undertaken at the instance of the Dutch Government (*Deutsch med. Woch.*, No. 39, 1887), wherein it is claimed that the cause of beri-beri is a micrococcus, and that it is to be classed therefore with infectious diseases; and the report of some cases at Newcastle by **Drs. Slater** and **Oliver** (*Lancet*, July 23, 1887). **Dr. Villette** (*Brit. Med. Journal*, "Paris Corr.," i., p. 905, 1887) considers that the three forms of the affection "depend on an acute myelitis which reacts on the motor nerves, causing paralysis and atrophy, or on the ganglionic system, causing œdema through vaso-motor paralysis;" that it is a distinct disease in which every form of treatment has failed, and that prevention alone is of any avail.



### 3. *Purpura hæmorrhagica*.

In an interesting essay, Dr. B. W. Richardson (*Asclepiad*, vol. iv., 1887, p. 1) distinguishes three varieties of *purpura hæmorrhagica*, viz.: (1) aqueous *purpura*, apparently the same as *hæmophilia*; (2) saline, or scorbutic; and (3) vascular, depending on changes in the minute vessels. The treatment varies with each type. In the first form he supplies a fair amount of fresh animal food, reduces to a minimum the amount of fluid ingested, and advises frequent purgation. Superphosphate of iron combined with peroxide of hydrogen is the best ferruginous medicine. Out-door life and moderate exercise, but avoidance of violent exercises and exposure to injury, are enjoined. In the second form, the dietetic rules are those of scurvy, and medicinally hydrochloric acid and hydrogen peroxide. In the third form, turpentine is of great service, best given in glycerine in doses of 3 to 5 drops three or four times a day.

### 4. *Filaria sanguinis hominis*.

A paper on *filaria sanguinis hominis* in S. Formosa was read at the Epidemiological Society by Dr. Wykeham Myers (*Lancet*, i., 1887, p. 732), and the report states that "with regard to treatment, he advocated, when practicable, removal from a filarially infected region, but when this could not be accomplished, filtering and boiling all water drunk; and for local treatment pressure both on the affected part by indiarubber bandages and over the arteries supplying the region, in preference to deligation of arteries."

### 5. Treatment of anæmia and chlorosis.

Sir Dyce Duckworth (*Brit. Med. Journal*, i., p. 562, 1887) considers that many cases of essential anæmia are inadequately treated. He would retain the term "chlorosis," and considers that the amenorrhœa with which it is associated is secondary to it. He refers to the liability of chlorotics to gastric ulcer, and to the supervention of mitral disease on the cardiac debility that arises in chlorosis. He regards iron as the specific for this form of anæmia, and attributes failures to the improper administration or insufficient usage of the drug. At the same time, he concurs in the statement made by Dr. Wilks some years ago, that some cases may be cured by aloes, without iron. Saline aperients, good diet, with 4 to 6 ounces of Burgundy daily, are often of value. He alludes to the frequent relapses, and the need in some cases of attention to the digestive system prior to the administration of iron. As to the form in which the iron may be presented, he prefers the chloride and sulphate, and also points to the advantages of chalybeate spas. He insists on the value of rest and on the

importance of continuing treatment until the venous murmurs disappear.

Prof. Nothnagel (*Allg. med. Zeit.*, 32 and 33, 1887, and *Med. Press and Circ.*, Nov. 2, 1887), in a clinical lecture on the same subject, says that although in chlorosis, which depends on hypoplasia, it is impossible to remove the cause, the "old, old treatment" by iron stands in the front rank as a means of ameliorating the condition. In milder cases it suffices to improve digestion, by resort to the open air, the mountains, or the seaside, whereby such patients are enabled to assimilate sufficient iron from the food they take. Bathing should be at first prohibited, and when commenced should be most cautiously pursued. In less tractable cases iron is the remedy. Of the various preparations he likes the least the "compound ones," as iodide of iron, syr. ferri iod., etc. The sulphate and the perchloride have their special properties due to their combination, but are not always well borne, and then the lactate, or reduced iron, are preferable. But in whatever form iron be taken, it will be absorbed as a hydrochlorate or albuminate. He protests against the misuse of arsenic in chlorosis, for he does not think that it has been proved to be a tonic *par excellence*. As to ferruginous baths, he attributes their good effects to the other saline ingredients, and not the iron which the natural waters contain. He mentions manganese "only for the sake of its historical interest," and alludes to the recent advocacy of sulphur by Schulz and Strübing, without, however, pronouncing an opinion on the merits of the remedy, as he was still engaged in giving it a trial.

### 6. Sulphur in chlorosis.

Drs. Hugo Schulz and Paul Strübing (*Deutsch. med. Woch.*, No. 2, 1887) have found that in those cases of chlorosis which yield neither to treatment directed to improve the digestion nor to iron, but which may even be rendered worse by that drug, sulphur is of great value. It may be that the sulphur supplies some deficiency in the organism which cannot be met by iron. Details are given of seven well-marked typical cases of chlorosis, which enable them to formulate certain conclusions. Thus, in four of these cases iron was inoperative, although administered for a long time, but sulphur produced a cure. In other cases, after sulphur had been taken for a long time, the iron treatment was commenced and was successful; as if the sulphur treatment had so modified the tissue-albumen as to enable it to react to iron. But those cases which are complicated with gastro-intestinal catarrh do not bear sulphur treatment.

## 7. Subcutaneous blood injection and saline transfusion.

In a previous volume (1885, p. 95) some account was given of the practice of the subcutaneous injection of blood as a remedy for anæmia and substitute for intravenous transfusion, introduced by Prof. von Ziemssen. He returns to the subject in one of his recently published clinical lectures (*Klinisch Vorträge*, vol. ii., p. 2, Leipzig, 1887, transl. in *Journ. of Amer. Med. Assoc.*, July 9—16, 1887). After a long historical survey he points out how a stop was put to the practice of transfusion of animals' blood by the experiments of Landois, Ponfick, and Panum, which incontestably prove the dangers of heterogeneous transfusion. For although defibrinated blood of the same species of animal may both prevent death from hæmorrhage and assist functional repair, yet transfusion of the blood of another species, whilst averting immediate death, produces hæmoglobinuria, renal and pulmonary infarcts, from disintegration of the foreign corpuscles. He also claims for subcutaneous injections a freedom from the risks incidental to transfusion, and states that no fever follows the injection, even of as much as 100 to 200 c.cm. of blood at one sitting. The blood taken from the donor's arm (with due regard to antiseptic precautions) is whipped as it flows, and the defibrinated blood placed in a beaker, kept by a water bath at a temperature of 37° to 40° C. until required. The patient is then prepared, the outer part of the thigh being selected for the injections, and, if necessary, the arms also. Chloroform must be administered, owing to the painful massage that has to be practised to facilitate the injection. The syringe (glass with metal protectors) has a capacity of 25 grms., and is furnished with a long, but not too fine, cannula. The injection is made slowly, the limb being subjected to vigorous massage whilst it proceeds. A fresh spot is selected for each injection, of which there may be several at one sitting. Ice bags are applied afterwards, and although ecchymosis often follows, inflammation seldom occurs. With small quantities the pain is very slight, but after the injection of large amounts there is considerable pain, which may last some time. The effect of the injection is to cause an immediate but temporary increase in the hæmoglobin, followed by a decrease, but not to so low a point as before the injection. By repeating the injections after an interval of some days, the amount of iron in the hæmoglobin may be gradually increased. As an example, a case of severe chlorosis treated on this plan is quoted. No improvement had followed six weeks' treatment by iron and a generous diet. The injection of 200 c.cm. of



defibrinated blood caused a rise in the percentage of hæmoglobin from 24·6 to 42·2. In a week this had fallen to 29·5, when the injection was repeated, with the result that the percentage rose to 38·5. Three weeks later the percentage was 32·8, and it rose to 64·5 after a third injection (275 c.cm.), and ten days later it was 44 per cent. There was a corresponding improvement in the colour of the skin, appetite, sleep, and symptoms generally. Prof. v. Ziemssen also advocates the subcutaneous injection of salt solutions (sodic chloride, 7·5 grms. to 1 litre) as a means of saving life in acute anæmia from hæmorrhage and in cholera; but he points out that for more permanent effects blood injections are necessary. Although subcutaneous injection and intravenous transfusion are methods which may be employed in many conditions, such as gas poisoning and acute infective disease, yet he thinks their greatest value is in chronic anæmias.

#### **8. Spleen pulp in anæmia.**

A somewhat singular remedy for anæmia is that introduced to notice by Maragliano (*Deutsch. med. Zeit.*, Jan., 1887, cited in *Therapeutic Gazette*, March, 1887). It consists in the pulp of the spleen (ζiv) given in emulsion of bitter almonds (ζx) and brandy (ζij) with meals; these quantities sufficing for the twenty-four hours. Five cases of chlorosis were so treated with benefit.

#### **9. Oxygen enemata.**

Gaseous rectal injections have not been limited to the Bergeon method of treating phthisis. Dr. Kellogg (*Therapeutic Gazette*, Sept., 1887) advocates enemata of oxygen gas to the extent of 2 litres daily. He has employed them with benefit in lithiasis, but believes they may be applied to a variety of diseases as a substitute for inhalation. The gas would be absorbed by the portal blood, and would act especially on the hepatic and digestive functions. Much more oxygen is, he considers, absorbed by this method than can possibly be taken up by inhalation.

# MEDICAL DISEASES OF CHILDREN.

BY JAMES F. GOODHART, M.D., F.R.C.P.,

*Physician to Guy's Hospital and the Evelina Hospital for Sick Children.*

---

## 1. Pyrexia.

Steffen (*Jahrbuch f. Kind.*, 26, i., p. 9) continues his careful work in this matter, and has an elaborate paper on the treatment of typhoid fever by sulphate of thallin. It very seldom produces any nausea or vomiting, and it is a certain antipyretic, thus reducing the dangers which excessive pyrexia imposes on the viscera. In his former work 102° (about) had been taken as the degree of pyrexia for which an anti-pyretic should be given, but latterly it was administered when the temperature had risen to 100·4 (38 C.). The dose varied from 0·25 to 0·125 (say 2 to 4 grains) of sulphate of thallin, and if after the first dose the temperature were not reduced, a second dose, and even a third, was given. The amount per diem was sometimes as much as 12, generally about 10 grains. Eleven cases are given in detail, the ages varying from one and a half years to fourteen years.

Kohts, of Strasburg (*Therap. Monats.*, 1887, i., Sec. 2) has also made use of this drug in typhoid fever (fifteen boys and nine girls from two to thirteen years old). In young children it may be given sweetened in wine or water. To children above six, in capsules. The dose given varied from  $\frac{1}{2}$  grain to  $2\frac{1}{4}$  grains, according to age, being regulated by the effect of the first dose. The remission usually lasted two to three hours; was sometimes accompanied by free perspiration, but never by cyanosis, chills, or rigors. Convalescence was slow in these cases, and the patients were remarkable for their cachectic and anæmic appearance. The author prefers the treatment to that by antipyrin or bathing, but recommends its discontinuance as the temperature declines. But he thinks that by the cautious administration of the remedy at the outset of the remitting stage of the disease it may be possible to avoid a tedious convalescence.

**Widowitz** (*Centralbl. f. Kinderh.*, No. 10, 1887; *Archives of Pediatrics*, Oct., 1887) has used antifebrin in a considerable number of cases of disease of various kinds, including pneumonia, bronchitis, tuberculosis, intestinal catarrh, scarlatina, and measles. The drug was given in doses of about  $1\frac{1}{2}$  grains to children of three or four years, and of 3, 4, and 6 grains to those older. Widowitz considers that the effect depends more upon the child, and upon the disease, than upon the size of the dose. The general effect in quieting restlessness and fretfulness was good, but the duration of disease was not perceptibly shortened.

## 2. Dentition fever.

**Clemente-Ferreira** (*Rev. Mens. des Mal. de l'Enf.*, Oct., 1886) advocates the use of antipyrin in the febrile conditions that accompany dentition. It is not only antipyretic but also a nervine sedative. It may be given to a teething child in doses of 12 grains daily, the dose being repeated until the fever and other symptoms disappear. If there be any sickness, it may be given per rectum.

## 3. Scarlatina.

**Drs. Jamieson and Edington** (*Brit. Med. Journ.*, vol. i., p. 1,262, 1887) have put forth some observations which go to show that the contagium of the disease is rendered sterile by treating the sick in a particular manner. The method recommended is to disinfect the throat by painting it frequently with a strong solution of boracic acid in glycerine (a saturated solution of boryglyceride in glycerine); and, as regards the skin, to employ warm baths every night from the very first, and to apply to the entire surface of the body, including the head, an ointment composed of Carbolic acid, grs. 30; Thymol, grs. 10; Vaseline,  $\text{ʒi.}$ ; Simple ointment,  $\text{ʒi.}$ , night and morning. During three years many opportunities of testing the efficacy of the plan have occurred, and it has not as yet failed, the disease having never spread to other members in the various houses in which it has been adopted. Dr. Edington believes that he has carried the question a stage further and isolated the material germ, but this matter is still under discussion, and moreover forms the proper subject of another section of this volume.

**Dr. Clement Dukes** (*Brit. Med. Journ.*, vol. ii., p. 67, 1887) writes to endorse the value of a treatment of scarlatina originally advocated by Dr. Illingworth, who claims for the biniodide of mercury that it is a specific. Dr. Dukes believes that the drug not only arrests the fever but prevents the desquamation of the skin, or arrests it to such an extent that a slight scurf on hands and feet alone results.



**Dr. Illingworth** (*Brit. Med. Journ.*, vol. ii., p. 508, 1887) also speaks favourably of the biniodide in suspension for the sore throat of scarlatina, and thinks that for diphtheritic ulceration of pharynx or nose it is also well worth a trial. Taking two ounces of the bichloride of mercury solution, a 1 in 4 solution of iodide of potassium or sodium is added gradually until a cloudy red liquid is secured. To this is added half an ounce of glycerine for the purposes of the suspension.

**C. G. Rothe** (*Archiv f. Kind.*, Bd. viii., Hft. 5, p. 391) also writes in its favour, having tried it in forty cases of diphtheria or scarlatina. The course proved more moderate and of shorter duration with, than without it.

#### 4. Diphtheria.

**Lax** (*Journ. de Méd. de Paris*, Feb. 6, 1887) writes in favour of pilocarpin. In an epidemic of sixteen cases, six were treated by local applications of nitrate of silver and of chlorate of potash, both as gargle and medicine. Two of these died. The other ten had pilocarpin only, and all recovered. Three grains of hydrochlorate of pilocarpin, and a minute dose of pepsin, were put into two ounces of water, and  $\zeta j$  to  $\zeta ij$  given. After three days' medication the membrane would all disappear.

**Lewis Smith** (*New York Med. Record*, April 9, 1887) has witnessed dangerous results from its administration, the patient dying of extreme dyspnoea.

**Jacobi** (*New York Med. Record*, No. 15, p. 402, 1887) advocates papayotin in watery solution (1 in 20) for spray or painting.

**Woronichin** (*Jahrb. f. Kind.*, Bd. xxvii., Hft. 1 and 2, p. 61) has an elaborate article bristling with tables bearing on the therapeutics of diphtheria, and based upon his own trials of various methods in the Elisabeth Children's Hospital at St. Petersburg: Wiss's method of quinine and hydrochlorate of ammonia; that of Reitz by the internal administration of thymol; of liquor ferri perchlor.; chlorate of potash; chlorine water; benzoate and salicylate of soda; various preparations of quinine; turpentine; painting of various solutions, all pass under notice. The conclusion arrived at is that so long as the larynx remains free, and the disease is not of the gangrenous form, the mortality is not large, and hence any treatment gives good results, be it only that of hydrochloric acid. But that when the disease is of a phlegmonous and gangrenous form it is dangerous to life under any method, and yet these can alone serve to guide the judgment as to the value of any treatment.

**M. Lewentauer** (*Centralbl. f. Kind.*, i., 1887) found turpentine work remarkably good effects in a two-year-old child. A single

dose of a teaspoonful was given prior to resorting to tracheotomy with immediate relief.

**A. Brondel** (*Bulletin Gén. de Thérap.*, Nov. 15, 1886) has obtained remarkable success with what he terms treatment by benzoate of sodium. This drug, however, was given with sulphide of calcium. The throat was sprayed hourly with the benzoate, and tonics and antipyretics given as occasion demanded.

**Dr. Schenker** (*Der Fortschritt*, No. 3, Feb. 5, 1887; abstract, *Lond. Med. Record*, April 15, 1887) has made trial of oil of turpentine internally, ten drops to a teaspoonful, thrice daily. Many children objected to it. In some it caused vomiting and headache. It caused no albuminuria or other evidence of renal irritation. In all the patients great improvement in the respiration was noticed after one or two hours, and on the second or third day the membranes became looser, and were finally cast off. Other measures were adopted, such as cold water dressing, cold baths, antipyrin, and salicylate of soda. Stimulants were freely used. Of the thirty-six patients thus treated, five died; in four tracheotomy was necessary, and all these recovered.

### 5. Quinsy.

**Mr. W. E. Green** (*Brit. Med. Journ.*, vol. i., p. 1158, 1887) writes to advocate a combination of guaiacum with aconite. The case of an infant, æt. eight months, is told, that took  $1\frac{1}{2}$  minim of tincture of aconite, with 2 minims of tincture of guaiacum, every hour for thirty-six hours,  $\frac{1}{2}$ -minim doses having previously failed. Mr. Green writes, "I have often seen these large doses well borne by infants and young children, but I always prescribe a stimulant with the aconite, ammonia to young children, strychnia or nuxvomica to older ones.

### 6. Whooping cough.

**Mr. George Holloway** (*Brit. Med. Journ.*, vol. ii., p. 827, 1887) has applied Guerder's treatment by nasal insufflation (*vide* "Year-Book," 1886, p. 99) of boric acid in twenty-four cases. Eight were under treatment from fourteen to twenty-one days, one for twenty-four days, two for twenty-six days, one (nursed by a careless mother) five weeks. Notes of these cases are given more in detail. Two to three grains were blown into each nostril by a special insufflator every three hours during the day, and once during the night.

**Michael** (*Archiv f. Kind.*, viii., 2, p. 99) continues his previous investigations in the same direction. He thinks that in the majority of cases the duration of the disease may be shortened by the insufflation by the nose of pulverised benzoin. A relatively bad prognosis as regards the success of the treatment may be given

if adenoid vegetations are present, or if severe attacks of sneezing occur.

H. S. Vetlesen (*Archiv f. Kind.*, viii., 5, p. 394) has obtained good results from a combination of cannabis indica, 1·0; extract of belladonna, 0·5; rectified spirit and glycerine, of each 5·0. Four to fifteen drops morning and evening.

### 7. Acute pneumonia.

Barthel and Moritz (*Archiv f. Kind.*, Bd. viii., Hft. 4, p. 297) are well pleased with the inunction of blue ointment in this disease. One hundred and one cases were thus treated; seventy-three recovered and twenty-eight died. In the years 1883 and 1884, thirty-two patients affected with croupous pneumonia were treated, with only two deaths, a mortality of only 6·2 per cent. Slight salivation was produced in several cases. The inunctions were commenced as soon as the diagnosis was made.

Riess (*Centralbl. f. Kind.*, 10, 1887) has used pilocarpine in a variety of respiratory diseases, such as pneumonia, whooping cough, croup, &c. He found that in all cases an increased bronchial secretion resulted, and in most cases with benefit. In pertussis  $\frac{1}{7}$  gr. (about) of the hydrochlorate was injected subcutaneously every day, or on alternate days in children of eight to twelve years. It occasionally excited vomiting, but never any dangerous symptoms.

Ripley (*New York Med. Record*, 5, 1887) has a paper on the value of quinine as an antipyretic in pneumonia, and he concludes that it should be abandoned. If an antipyretic be indicated, we have in antipyrin, or even salicylate of soda, a remedy more certain, more prompt, and less injurious.

### 8. Broncho-pneumonia.

M. Zinis, of Athens (*Bulletin Gén. de Thérap.*, p. 549, i., 1887) has employed iodide of potassium with good effect. Its action is more efficacious when given at the onset than when the disease has far advanced. It would not appear to be effective in the disease of measles or pertussis. It is more particularly advantageous in vigorous children, and in those of one to five years of age than in those younger. Seven or eight grains up to twenty-three or twenty-four are given per diem, according to the age. It lowers the temperature one or two degrees in two or three days; it sensibly diminishes the frequency of respiration; it softens the cough, and makes the expectoration more easy. If in one or two days no improvement is manifested its continuance is useless.

### 9. Bronchitis.

Dessau (*Archives of Pediatrics*, p. 19, 1887) has a good practical article on this subject. When the catarrhal process is limited to the larger tubes, and there is little or no increase of temperature,



in infants under six months antimonial wine in combination with ipecacuanha wine, a quarter to half a drop of the former and double this of the latter, every hour is beneficial. A twentieth of a grain of golden sulphuret of antimony in sugar of milk every hour is also useful. Tincture of bryonia of the German pharmacopœia, in doses of half a drop to a drop every two hours, is sometimes useful also, as is the inspissated juice of sabal serrulata, or saw palmetto, five to twenty drops three times daily.

In severe bronchitis, accompanied by fever, tincture of aconite root, in doses of half a drop to a drop, according to age, every hour, reduces the temperature and establishes resolution by reducing arterial tension and thus relieving the congestion and swelling of the mucous membrane. Nitrous ether is also a depressor of arterial tension, and is therefore in like manner useful in these cases. It is given by the author in the following formula, which he considers a valuable one in the whole range of acute pulmonary diseases in children :

Liq. ammonia acet.	...	...	...	5iv.
Sp. ether nit.	} aa.	...	...	5iss.
Syrup ipecac.				
Syrup senegæ...	...	...	...	5i
Syrup limonum	...	...	...	3i 5i 33tis. hs.

Descraizilles (*Therapeutic Gaz.*, p. 57, 1887, and *Revue Mensuelle des Mal. de l'Enfance*) speaks well of an alcoholic solution of turpentine mxxx. to 3x., and water 3vi. A quantity not exceeding nine grains given daily produced excellent effect.

#### 10. Dyspepsia in infants.

Dr. Carl Lorcy (*Jahrb. f. Kind.*, Bd. xxvi., Hft. 1, p. 44) recommends the washing out of the stomach in infants in cases of acute or chronic dyspepsia. He uses a No. 11 or 12 English gum elastic catheter, and uses tepid water to which a little salt is added. The water was allowed to run in and then off again several times until it came away clear. All irritating material is thus removed from the stomach, and proper dieting, &c., have fair play. Nineteen children were thus treated; they rapidly improved and gained in weight.

Epstein, who originally recommended this plan of treatment (*Archiv f. Kind.*, Bd. iv., 1883) returns to the subject (on the indications for washing out the stomach in diseases of the stomach and intestines in sucklings) in the *Jahrb. f. Kind.*, Bd. xxvii., p. 113, and he adds that in the discussion that followed the reading of his paper Profs. Ranke, Hirschsprung, Heubner, Thomas, and others, all agreed as to the value of the treatment.

## 11. Acute gastritis in early childhood.

Dr. A. Seibert (*Jahrb. f. Kind.*, Bd. xxvi., Hft. 3 and 4, p. 348) sums up thus concerning this disease. It is relatively seldom met with, and when it is, may be easily mistaken at its onset and during its progress for typhus, malarial affections, and meningitis. Its cause is always to be sought in the child's food, and the treatment consists in removing and preventing the access to harmful things, giving appropriate diet, and allaying the irritability of the mucous membrane of the stomach by letting it alone.

## 12. Summer diarrhœa.

Dr. H. Tomkins (*Lancet*, vol. ii., p. 361, 1887) publishes some bacteriological observations in connection with this complaint. Cultivations were obtained in profusion from the coats of the intestines, and to a less degree from the mesenteric glands and the kidneys. Dr. Tomkins, while abstaining from any positive conclusions, is yet able to assert from actual experiment that a very small dose of microbes, artificially cultivated from the original growth, will produce a smart attack of diarrhœa.

Dr. Emmett Holt (*New York Med. Jour.*, Jan. 29, 1887) has a most interesting paper on "The antiseptic treatment of summer diarrhœa." The author has long arrived at the conclusion that nearly all the diarrhœa and intestinal catarrhs of young children are essentially dyspeptic in their origin. The comparatively rare cholera infantum is excepted. Excessive heat, artificial feeding, and bad hygienic surroundings all unite to produce the dyspepsia. Heat is especially, but by no means exclusively, insisted upon, as causing decomposition in milk and other foods, and the production of ptomaines. The indications for treatment are, first, to clear out the bowels and thus get rid of the offending material; secondly, to stop decomposition, &c. &c. Dr. Holt agrees with a large body of practitioners in recommending castor oil as a safe and efficient aperient if the stomach be not too irritable. All the best authorities seem to be agreed that a large number of these cases are arrested at once by a dose or two of this drug. To arrest decomposition Dr. Holt has made trial of salicylate of sodium, of naphthalin, and resorcin. Comparing the various methods the following table is given:—

	Number.	Cured.		Improved.		Unimproved.		Died.	
		Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Opium, Bismuth, Castor Oil, &c. ...	300	...	50	...	27	...	18·3	...	7·3
Salicylate of Sodium ...	81	...	84	...	7·4	...	7·4	...	1·2
Naphthalin ...	44	...	67	...	15·8	...	13·5	...	2·2
Resorcin ...	27	...	55	...	22	...	22	...	...

Dr. Holt prescribes the salicylate in doses of from 1 to 3 grains every two hours, according to the age, from three months to three years. In these doses the aqueous solution is tasteless, and severe and persistent vomiting is frequently controlled by it.

Naphthalin is not disagreeable to the taste, although of such a strong odour. It is best administered rubbed up with sugar of milk, and in doses of gr. i. to grs. v. Resorcin must be used in smaller doses, gr.  $\frac{1}{2}$  to gr. ii. ; it is bitter, and less easily given on that account, although freely soluble in water.

I am quite prepared to endorse the praise that is here bestowed upon salicylate of sodium. I have for the past two years prescribed it in many cases, and it is certainly one of the most useful drugs we possess.—J. F. G.

Lunin, of St. Petersburg, has published some results with naphthalin. He has given  $7\frac{1}{2}$  to 30 grains per diem in the form of an emulsion with castor oil to children between one and five years (*Lancet*). So also has Widowitz (*Jahrb. f. Kind.*, Bd. xxvi., s. 372).

M. Hayem (*Bulletin Gén. de Thérap.*, vol. i., p. 441, 1887) maintains that the green-coloured diarrhoea of infants is due to a substance produced by a particular bacillus. The disease is contagious, and is propagated by the germs deposited on the napkins. All soiled linen, therefore, whether by vomit or dejecta, should be removed as quickly as possible, and plunged in a 1 per cent. solution of corrosive sublimate. M. Hayem advocates the administration of a 2 per cent. solution of lactic acid, one teaspoonful to be given a quarter of an hour before putting the child to the breast, and from five to eight doses to be given in the twenty-four hours.

Goelet (*New York Med. Journ.*, Aug. 6, 1887) advocates salol as successful for infantile diarrhoea. For a child six months old  $\frac{1}{2}$  grain may be given every two hours ; at a year old 1 grain to  $1\frac{1}{2}$  grain may be given ; at two years  $1\frac{1}{2}$  grains to 2 grains. The writer also thinks highly of ice-water enemata in such cases, particularly where there is rectal tenesmus with bloody or slimy stools. (Salol is made from phenol and salicylic acid, and is very insoluble.) M. Lombard states (*Bulletin Gén. de Thérapeutiques*) that it is absolutely harmless.

Brown (*Journal de Médecine*, July 31, 1887) considers turpentine in one or two drop doses (for a child of one year old) of great value in similar cases.

### 13. Ascarides.

Dr. Sidney Martin (*Practitioner*, Oct., 1886) claims for small



doses of rhubarb that large numbers of worms are thus brought away, and the bowels thus regulated. The formula he advocates is that of tincture of rhubarb  $\text{mij}$ , carbonate of magnesia  $\text{gr.ij}$ , tincture of ginger  $\text{mj}$ , aquam ad  $\text{3i}$ , twice or three times a day, and varied according to age.

#### 14. Infant-feeding.

Mr. R. W. Parker has republished a paper, read before the Medical Society of London, "On the Alleged Dangers of Starch-containing Foods during the Period of Infancy." He insists that many of the evils attributed to starch are due to the congenital debility induced by rapid child-bearing in the mother, and various other adverse circumstances, and argues that too much stress has hitherto been laid on the evil effects of artificial feeding. The paper would appear to be an indirect plea for the use of starch as a food, but the maternal nursing is quite properly insisted upon, all that is really claimed for "foods" being that they do not deserve all the bad things that have been said of them. Mr. Parker is probably quite correct within the limits he prescribes. At the same time, in these days when infant foods are rampant, such a doctrine must be preached with all due care, since it is only too likely to be adopted by some who would not safeguard it so adequately as does Mr. Parker.

#### 15. Thirst.

Toussaint (*L'Union Méd. du Car.*; *Archives of Ped.*, 1887, p. 119) writes that milk is no remedy for thirst; it may make it more intense. Thirst causes healthy breast-fed infants to cry for long periods of time in many instances. There are many cases of indigestion due to weakness or insufficiency of the child's gastric juice, greatly benefited or cured by an occasional drink of water. Lewis Marshall has also insisted upon the same point, and the hint is unquestionably one of much moment.

#### 16. Catarrhal jaundice.

Dr. Eduard Kraus (*Archiv f. Kind.*, Bd. viii., Hft. 1, p. 1) has carried out Monti's treatment of intestinal irrigation for this affection in a series of nineteen cases. The ages of the patients varied from three years to sixteen years of age. The quantity from one to two quarts, according to the age. The temperature of the water used varied from  $56^{\circ}\text{F}$ . to  $68^{\circ}\text{F}$ . Colic is sometimes produced with the water of low temperature. In most of the cases four or five irrigations were needed to produce a cure.

#### 17. Nocturnal enuresis.

Unna (*Der Fortschritt*, Feb., 1887; abstract in *London Med. Record*, April 15, 1887) has of late employed the fluid extract of the root-bark of the sweet sumach (*Rhus aromatica*). It acts as a

stimulant to the non-striated muscles of bladder, &c., and after three years' experience Dr. Unna recommends it as a specific. To infants and children up to two, 5 drops are given night and morning; from two to six, 10 minims; and to older children, 15 minims twice daily. The effect is not permanent; it ought, therefore, to be given daily until the weakness has been overcome by other measures.

Adams (*Archives of Pediatrics*, vol. iv., p. 193, 1887) advocates circumcision in all cases of long prepuce, even if the foreskin can be retracted.

### 18. Renal sarcoma in infancy.

Angel Money (*Lancet*, vol. i., p. 827, 1887) related four cases at a meeting of the Medical Society of London. All were females, from eighteen to thirty-four months old. The disease was unilateral in all, but had in all extended beyond the organ primarily affected, either by secondary deposits or direct extension. Hæmaturia occurred in none. The author concludes from a study of recorded cases in which nephrectomy had been performed, that life was not prolonged even in successful cases, and on the whole he thinks the removal of the tumour useless.

### 19. Chorea.

Dr. Sturges (*Lancet*, vol. i., p. 112, 1887) discourses on school-made chorea. He writes: "It is perfectly certain that for a proportion of chorea that would be under-estimated at one-fourth, school is responsible; and the mode of injury may be classified pretty much as follows: (1) Over-schooling, where the hours are too long or the lessons (especially *sums*) are too hard. (2) Excitement, especially at examination. (3) Home lessons, where there is no home to speak of, or no home leisure. (4) Caning and other modes of punishment, particularly when unmerited."

"The evil comes," the author goes on to say, "from the fact that teachers do not differentiate their material in respect of temperament, ability, bodily health, and home circumstances. They might with advantage take a leaf out of the doctor's book, setting down the family and personal history of their pupils."

Riess (*Berl. klin. Wochens.*, No. 22, s. 392, 1887) gives details of chorea and other hyperkinetic diseases treated by physostigmin sulphate (Merck). In thirty-four cases were four of the extremely severe form in which the remedy did just as little as others. Twenty-six children were completely cured, twenty-four of them remarkably quickly; some after five or six, on an average after fifteen days, two only after a long course of weeks. The drug was administered subcutaneously; in the youngest children  $\frac{1}{2}$  milligramme, in older children 1 milligramme,

at first once, then twice a day. At first there would be vomiting half an hour or an hour after the injection, and also some amount of muscular tremor, but these usually quickly subside.

## **20. Spasmodic torticollis.**

Dr. Forchheimer (*Archives of Pediatrics*, Feb., 1887) writes on a form of this disease that he thinks is due to malarial poisoning. Eleven cases in all have been observed, and from them the author deduces the following propositions. The poison of malaria sometimes localises itself at the roots of the nerves supplying the superficial muscles of the neck (especially the spinal accessory). This poison may extend from the nerves to the meninges of the cord or brain, or to both. A relation exists between the poison of malaria and sporadic cases of cerebro-spinal meningitis. The ordinary treatment for malaria usually suffices for this peculiar form of localisation.

## **21. Infantile convulsions.**

Dr. W. H. Barlow (*Brit. Med. Journ.*, vol. i., p. 1326, 1887) in an article on "Respiratory Convulsions, with especial reference to Laryngismus Stridulus and Allied Disorders," advocates the use of musk; a third of a grain to a grain for a child of twelve months old. The article as a whole is well worth perusal as a general survey of the subject of infantile convulsions.

## **22. Rickets.**

The advantages claimed for phosphorus in this disease have been reported in previous years. Hasterlik advocates the solution of the phosphorus (0.01 per cent.) in bisulphide of carbon (0.25 per cent.) and one hundred parts of water. One teaspoonful is given twice daily, constituting a dose of 0.0001 grammes in the day. It is claimed for the bisulphide of carbon that besides acting as a solvent of the phosphorus it is useful in intestinal catarrh, so often present. (*Brit. Med. Journ.*, vol. i., p. 405, 1887.)

Stärker (*Centralbl. f. Kinderh.*, 4, 1887) gives twenty-three cases under the treatment of Prof. Thomas, of Freiburg. The drug was administered after the old fashion in cod-liver oil, a centigramme of phosphorus to 100 grammes of cod-liver oil, spoonful doses twice daily. The results are considered to have been good.

Escherich (*Münch. Med. Wochensch.*, 1887, vol. i., s. 3; *Centralbl. f. Kinderh.*, ii., 1887) has followed Hasterlik's plan. The remedy may be mixed with syrup when taken, but nothing will disguise its abominable taste. Nevertheless, children do not make much objection on this account. Escherich believes that this new method of administration will throw light on the question of the value of phosphorus as a remedy for rickets.



## SUMMARY.

There is but little to add to the foregoing details, for there has been little to record in the past year that is really novel. As heretofore, therapeusis has struggled for the mastery of such hitherto invincibles as pyrexia, diphtheria, and pertussis; and, as regards the first-named, with not a little success. A more extended trial of sulphate of thalline—the most recent anti-pyretic—goes far to prove that it is both sure and safe, and can be given in quantity sufficient not only to depress the temperature, but also to control the rise. For my own part, however, I would, nevertheless, enjoin caution—I have seen it produce temporary collapse.

But, to my mind, the most important contributions to the treatment of infantile disease during the year have been—first, those relating to the antiseptic treatment of diarrhœa, Dr. Emmet Holt's paper being one of high value from the wealth of material that it contains and its careful comparison of various drugs; secondly, that embodying the experience of Dr. Jamieson that it is possible to destroy the contagion of scarlatina through inunction of the patient with an antiseptic ointment. Facts of similar bearing were not wanting previously. If I remember rightly, Mr. Wynter Blyth made a similar statement three or four years ago in the public prints, as did also some lay observer; but the assertion was received with some amount of scepticism. What are we to say now when a physician well experienced in the disease claims that for three years no case treated in this manner has spread the disease, even though isolation was not attempted? If it be substantiated, too, no observation of greater import than that of Illingworth on the value of the biniodide of mercury in the cure of scarlatina and of scarlatinal nephritis has been brought forward recently; but at present there are not sufficient data to enable one to judge of the general efficacy of the remedy.

Looking over the records of the year's progress, there would seem to be a growing tendency to administer medicines in children as in adults by subcutaneous injection. Thus we have the advocacy of arsenic given by this method for chorea, physostigmin also; pilocarpine in diphtheria, etc. The results of the physostigmin treatment of chorea are so good on paper that they are noted in abstract; but as regards arsenic there seems no adequate reason for departing from the usual method of administration by mouth. And perhaps in these days of enthusiastic medication it may be as well to ask ourselves, as occasion seems to arise, what are the

advantages we propose to gain by this method which outweigh its obvious disadvantages in childhood?

During the past year many valuable papers have been written which are not given in abstract, either because they have dealt only indirectly with treatment by defining more precisely the thing to be treated, or else have contained no novelties. Of these may be mentioned :

**Cheadle** on the Pathology and Treatment of Laryngismus, Tetanus, and Convulsions (*Lancet*, vol. i., pp. 919-967, 1887).

**Abercrombie** on Hemiplegia in Children (*Brit. Med. Journ.*, vol. i., p. 1323, 1887).

**Chapin**, Peripheral Neuritis and the Painful Paralyzes of Early Life (*New York Med. Record*, No. 3, 1887).

**Sturges**, The Temperature of Young Children in Health and Disease (*Westminster Hosp. Reports*, vol. ii.).

**Byers** on the Jaundice of Infants (*Lancet*, vol. ii., p. 102, 1887).

**Day** on Constipation in Children (*Lancet*, vol. i., p. 828, 1887).

**Hase**, Scarlatinal Nephritis and its Treatment (*Jahrb. f. Kind.*, Bd. xxvi., Hft. 3, 4, p. 341).

**Barr**, Scarlatinal Nephritis and its Treatment (*Archives of Pediatrics*, Aug. and Sept., 1887).

**Holt** on Primary Nephritis in Infancy (*Arch. of Ped.*, Jan. and Feb., 1887).

**Simon** on Vomiting in Children (*Gaz. des Hôp.*, Nos. 62 and 70, 1887).

**Simon**, Treatment of Bronchitis in Children (*ibid.*, Nos. 97 and 99, 1887).

**Carmichael**, Bronchial Catarrh in Children (*Edin. Med. Journ.*, Oct., 1886).

**Wiederhofer**, The Treatment of Pleurisy (*Arch. of Ped.*)

**Holt**, The Treatment of Empyema (*New York Med. Record*, p. 602, 1887).

**Baginsky** on Acetonuria in Childhood (*Archiv f. Kind.*, Bd. ix., Hft. 1).

**Wohlberg**, Relapsing, Typhus, and Typhoid Fevers in Children (*Jahrb. f. Kind.*, Bd. xxvi., Hft. 2 ; Bd. xxvii., Hft. 1, 2).

Nor must I close without remarking that a volume in great part devoted to the treatment of disease in children has been published by **Angel Money** (H. Lewis), and that of foreign authors **Baginsky** has a new work on the diseases of children, and **Vogel** and **Rilliet** and **Barthez** have, the latter in part (vol. ii.), reappeared re-edited.

## CONTINUED FEVERS.

By SIDNEY PHILLIPS, M.D., M.R.C.P.,

*Assistant-Physician to the London Fever Hospital, and Physician to Out-Patients,  
St. Mary's Hospital.*

---

### **1. Antipyretic reagents in fevers.**

Fränkel (*Deutsche med. Wochensch.*, No. 43, 1886), comparing the action of various antipyretic agents, writes that all so-called antipyretic agents which are not specifics seem only to influence the apparatus regulating the body temperature, so that notwithstanding the fall in temperature the frequency of pulse is little altered, and the sensorium remains affected because the medicine does not affect the cause of the disease. Cold baths, however, regulate the entire nervous system, the circulatory and cerebral systems, as well as the centre that regulates the temperature. Hence the use of antipyretic drugs should be confined to cases of hyperpyrexia, in which cold cannot be applied, or where the pyrexia is high and the circulatory apparatus little affected. Pyrexia he regards as an important factor in eliminating disease.

### **2. Principles of treatment of infectious diseases.**

Dr. D'Orrenburg (*Centralbl. f. Kin.*, May 1, 1887) recommends that an attempt should be made to free the body from such poisons (or ptomaines) as have already entered it by increasing the discharge from the eliminating organs. The intestines may be disinfected by calomel and bismuth. In typhoid, he recommends that the bowels should be evacuated by castor oil, and nine to twelve pills should be given daily of subnitrate of bismuth, calomel, and senna, so that the motions shall be six to eight in twenty-four hours. In diphtheria he recommends, in addition to the purging, the administration of cyanide of mercury, to produce salivation and irritation of those parts of the membrane which are involved, and the throat should be frequently gargled with warm water. In scarlet fever he gives iodide of potassium, with



the object of preventing the microbes in the blood establishing themselves upon the skin.

### **3. On the influence of drinks on the temperature in fevers.**

Prof. Glax (*Tagleblatt der.*, 59, 1886) writes that drinks absorbed freely by fever patients produce, even when they are cold, a rise in temperature. He says a retention of the fluid in the body takes place in fever, and that it is only when the pyrexia has fallen to normal that they are eliminated with the urine.

The rise of temperature is in direct proportion to this retention of liquid. Prof. Glax suggests that in fever there is a loss of contractility of vessels, and this is increased by the augmented volume of blood when drink is taken freely. This slows the current of blood in the capillaries, and prolongs the time during which the red blood cells are in contact with the living tissue elements. In consequence, an increase of oxidation occurs.

### **4. Glycerine in the treatment of acute fevers.**

Semmola (*London Med. Record*, March, 1887) recommends glycerine in copious drinks, diluted by water. His prescription is, glycerine 150 parts, citric or tartaric acid 1 part, and water 300 parts. This solution forms an agreeable drink, and does not upset the stomach. It is said to diminish the quantity of urea in the urine.

### **5. Antithermic action of nitrogen inhalation.**

Dr. Valenzuela (*El Siglo Medico*, January 20, 1887) contends that inhalation of air containing nitrogen in large proportion has an antipyretic action, and that it opposes the infecting process. He believes that, unlike quinine, digitaline, antipyrine, and cold-water treatment, the effect of the nitrogen inhalation is to reduce the temperature, and to keep it reduced after the treatment is suspended.

### **6. Acetphenitidine as an antithermic agent.**

Kohler (*Wiener Medicin Wochens.*, No. 26, p. 27, 1887) finds that acetphenitidine is an efficient antipyretic in doses of 8—10 grains; it does not produce any bad symptoms, and one dose of 8—10 grains is more useful than repeated smaller doses.

O. Hinsberg and A. Kast (*Centralbl. f. die Medicin Wissens.*, Feb. 26, 1887) also recommend acetphenitidine in pyrexia. From experiments on dogs they found in very large doses only it produced toxic symptoms, somnolence, giddiness, vomiting, and cyanosis. Dr. Mayo (*Med. News*, Aug. 20, 1887) finds it slower in action than antipyrin or antifebrin, but probably on the whole safer. He thinks it should be given in large doses at the outset, and then followed up with further doses if required.

In composition it is a derivative of carbolic acid ; it crystallises in colourless needles, is slightly soluble only in water, but in alcohol readily.

### **7. Treatment of typhoid fever by antifebrin.**

**Gruneberg** (*Berl. klin. Wochens.*, p. 849, 1886) reports the results he has obtained in treating typhoid fever by antifebrin in doses of  $7\frac{1}{2}$ — $3\frac{3}{4}$  grains ; during the period of maximum temperature  $7\frac{1}{2}$  grains are required, and this reduces the temperature about 3·6 degrees, but a re-rise occurs in only half to three-quarters of an hour. This dose may, he advises, be repeated in six or seven hours in grave cases. He has ventured to give 30 grains of antifebrin in one day, and without evil result. He finds copious sweating follows antifebrin in some cases, and sometimes the subsequent rise of temperature is accompanied by violent shiverings. In scarlet fever he has found it to answer better than antipyrin.

### **8. Treatment of typhoid fever.**

**M. Bouchard** (*Gaz. des Hôpitaux*) prescribed in typhoid fever a purgative of 3 to 4 drachms of sulphate of magnesia repeated every three days ; 6 grains of calomel a day in twenty doses, one every hour, are to be given during four consecutive days. "This secures a general aseptic condition of blood," while local intestinal asepsis is obtained by the administration of vegetable charcoal with iodoform and naphthaline ; to these are added glycerine and peptone ; the mixture forms a black semi-liquid mass. Besides this very vigorous and multiple medication, M. Bouchard advises morning and evening an enema of a solution of carbolic acid. The patient also takes eight baths a day until his cure is complete. These baths are not to be cold, but should be 3·6° F. below the temperature of the patient ; the bath may be cooled down gradually to 86° F., but never lower, so as to produce a loss of heat without nervous shock.

Quinine is reserved for cases where the temperature, notwithstanding the baths, remains too high, and the dosage is from 30 grains during the first two weeks to 22 grains during the third week, and 15 grains during the fourth and fifth. The diet should be barley broth given freely, and the peptone and glycerine magma already described. This systematic treatment M. Bouchard admits does not dispense with the treatment of complications as delirium and peritonitis. M. Bouchard claims that the mortality has fallen in his practice from 25 to 10 per cent. under this complete treatment, and the average duration of the disease has been only nineteen days. Relapses, too, have occurred in only 10 per cent. of the patients instead of in 20 per cent.

### 9. The strangling of typhoid fever.

This is the title of a paper by M. Pécholier. The treatment consists in giving 15 to 20 grains of sulphate of quinine and digitalis, 3 grains in powder daily, and warm baths of fifteen minutes' duration repeated three times daily. After adopting this treatment from the commencement, "even while the diagnosis is still uncertain," M. Pécholier lost no case out of sixty-seven, and the average duration of the disease was but fourteen days.

M. Dujardin-Beaumetz (*Revue de Thérapeut.*, p. 144, March, 1887), commenting on this treatment, dwells on the fallacy of statistics of cure based on the treatment of cases before a diagnosis is possible, and believes that the epidemic of typhoid which showed such good results was an unusually mild one; he also expresses his disbelief in our present power of cutting short typhoid fever.

### 10. Treatment of scarlatinal sore-throat.

M. Odent (*Concours Méd.*) advises the following gargle: borate of soda, 6 parts; tincture of benzoin, 10 parts; and infusion of briar, 250 parts. This maintains an aseptic condition of the pharynx. Boric acid gargles are also good. M. Odent also recommends the application of powdered cocaine 1 in 100, or of a solution of cocaine 1 in 25, to the throat, if the pain accompanying the swelling is great; this renders less painful the painting several times a day of the tonsils with lemon juice. This treatment of lemon juice, preceded by the application of cocaine, he recommends as long as there is any sloughing membrane on the tonsils.

### 11. Treatment of scarlet fever by milk diet.

This treatment is recommended by Prof. Jaccoud (*Leçons à la Pitié en 1885.-6*). An exclusively milk diet is to be adopted from the very beginning of the fever, and is to be continued to the end of the seventh day after defervescence. The patients should take as much milk as possible, but the smallest quantity taken must be not less than  $2\frac{1}{2}$  quarts in twenty-four hours. This treatment is said by Jaccoud to be eminently preventative of scarlatinal nephritis.

### 12. Treatment of measles by warm water.

Dr. Cohn (*Archiv f. Kin.*, vol. vii., p. 6) in a severe epidemic of measles gave baths of 95° F.—99° F. He gave, in some cases, as many as six baths a day. The epidemic was a severe one, but the results extremely favourable.

### 13. Treatment of diphtheria by oil of turpentine.

In the *Centralbl. f. klin. Med.*, No. 3, 1887, Dr. Rewentauer reports the case of a child, aged two years, in whom the tonsils were much swelled and reddened, and covered by whitish exuda-



tion. Paintings with boric acid and with chlorate of potash were tried for three days ; the child's condition became worse, and he ceased to cough up membrane, the inflammation apparently spreading to the larynx. As a last resource before tracheotomy, a spoonful of pure rectified oil of turpentine was given, and the child rapidly improved, and recovered without opening of the trachea.

**Kapperger** (*Centralbl. f. klin. Med.*, No. 26, 1887) reports the case of a boy, aged eight, who had much enlargement of the tonsils, with distinct membrane on them and on the palate and uvula. On the fourteenth day the patient became much worse, with rapid small pulse ;  $\mathfrak{z}\mathfrak{j}$  of oil of turpentine was given, and the patient became better, to relapse thirty hours later ; but he again improved with oil of turpentine, and eventually recovered.

**Roose**, of Hamburg (*Therap. Monats.*, Oct., 1887) treated fifty-eight cases by drachm doses of oil of turpentine three times daily, with 4 minims of ether. He gave in addition a 2 per cent. solution of sodium salicylate, and gargles of chlorate of potassium, and found after one or two hours a great improvement in the patient's breathing, the diphtheritic membrane becoming loose and cast off. No albuminuria was produced. **Dr. Schenker** believes the turpentine acts not locally but by absorption, and in many patients found favourable results from giving the turpentine internally, in doses of 15 minims to a drachm. He regards turpentine, therefore, as a useful therapeutic agent in diphtheria.

The results of the turpentine treatment were rapid fall in pulse rate and in temperature, with alleviation of subjective sensations, shortening of illness ; danger of suffocation only occurred once, and then tracheotomy was performed ; as soon as the patient was free from fever the turpentine was discontinued. In ordinary cases  $\mathfrak{z}\mathfrak{v}$ . sufficed, and great caution was observed where the patients were anæmic or had diseased hearts. Paralysis only followed in one of the fifty-eight cases.

#### **14. Treatment of diphtheria by turpentine and gas tar.**

**Dr. Delthil** (*Le Concours Méd.*, 1886) speaks highly in favour of the treatment of diphtheria by fumigating with gas tar and essence of turpentine ; in addition the essence of turpentine should be frequently applied locally. To its prophylactic properties he attributes the fact that only three cases of contagion occurred among 670 attendants on 130 patients. He uses 20 parts of coal tar to 8 parts of oil of turpentine. The mixture is continually burnt in the room.

**Dr. Schenker** (*Der Fortschritt*, Feb., 1887) has tried this treatment somewhat extensively and with success.

### **15. Treatment of diphtheria by carbolic acid injections into the tonsils.**

Heubner (*Med. Chron.*, Nov., 1886) regards a germ as the cause of the diphtheritic exudation. This chain-coccus is found in the necrosed patches and in the lymphatic glands and neighbouring tissues. To kill the germ applications to the surface are of little use, and Heubner injects into the tonsils carbolic acid solution. The fluid is sucked up by the tonsils as by a sponge, and carried to the glands. The mortality of cases thus treated (88 in number) was only 4·5 per cent.

### **16. Treatment of diphtheria by oxygenated water.**

Vogelsang (*Journal de Méd.*, Oct., 1886) proposes the internal administration every two hours of a 2 per cent. solution of peroxide of hydrogen. The oxygenated water thus given has antiseptic properties, and two cases treated in this way rapidly recovered, taking nourishment with eagerness, and getting rid of the false membranes.

### **17. Treatment of diphtheria by iodol.**

Dr. L. Stembo (*Proc. Vilna Med. Socy.*, No. v., 1887, and quoted in *Brit. Med. Journ.*, April 9, 1887) tried the local use of iodol in seven cases of diphtheria, two of which were severe. The drug was applied alone or in powder, or in solution  $\mathcal{R}$  iodoli  $\mathfrak{z}$  ss., liq. vini  $\mathfrak{z}$ ss., glycerini  $\mathfrak{z}$ iijss. All the patients recovered after treatment lasting from four to six days. The advantages claimed for iodol are its complete harmlessness, its freedom from unpleasant smell or taste, the painlessness of its application, and the absence of any untoward secondary effects.

### **18. Treatment of diphtheria by iron and carbolic acid.**

Dr. J. Irving (*Brit. Med. Journ.*, Jan. 8, 1887) writes of the favourable results he has obtained in diphtheria by the internal administration of iron with glycerine of carbolic acid. For a child one year old he prescribes liq. ferr. dialysati  $\mathfrak{z}$ gs., glyc. acid carbolic  $\mathfrak{z}$ gs., glycerin pur.  $\mathfrak{z}$ igs., syrup simplicis  $\mathfrak{z}$ igs. aq. ad  $\mathfrak{z}$ ii. One teaspoonful to be given every two hours, and it should be continued eight days at least. This mixture, he adds, is useless if the larynx is involved.

### **19. Treatment of diphtheria by sulphite of magnesia.**

Mr. W. G. Burnie (*Lancet*, Feb. 19, 1887) calls attention to the good effect of sulphite of magnesia in diphtheria. He advises a solution of the strength of 1 oz. to 16 oz. of water to be used as a gargle. In children and in bad cases he also applies the powder direct to the fauces by means of a damp throat brush. "An

arrest of the disease may be looked for within a few hours of its use."

## **20. Treatment of diphtheria by injection of perchloride of iron.**

Dr. Guelpa (*Revue de Thérap.*, Aug. 1, 1887) treated 200 cases in one epidemic of diphtheria by the injection into nose and mouth of perchloride of iron. The injections were made every quarter of an hour, when possible, even during the night. The mortality was only 15 per cent. His conclusions are that cauterisations in diphtheria are never advantageous, and often injurious; that injections of a solution of perchloride of iron of  $\frac{1}{2}$  to 1 per cent. strength give the most favourable results, and that these injections are the best preventative of contagion, and also in most cases prevent extension of the diphtheritic membrane.

Dr. Guelpa concludes his paper with the expression of his belief that the therapeutic action of the iron is quite secondary, for iron has often been used in different manners, but never with such success. What constitutes the real basis of the treatment is the most frequent possible irrigation and washing, and probably solutions of other substances he thinks would do equally well, though he has not tried them. He insists that the injections shall be made as frequently as possible.

Dr. Guelpa adds the treatment is very easy both for the invalid and for the medical attendant and nurses, an assurance which it is not easy to accept.

## **21. Treatment of diphtheria by inhalations of corrosive sublimate.**

Dr. J. Strumpff (*Munch. Med. Wochens.*, No. 12) lost only one of thirty-one cases of diphtheria which he treated in this way. He never observed any symptoms of poisoning by mercury, except sometimes salivation. In children of six years of age he used a solution of one part of sublimate in 1,000. In children from two to six, he only used a solution of half this strength, and a still weaker solution below that age. Only one drachm of solution is to be used as a spray at each application.

## **22. Treatment of diphtheria by local applications of arsenic.**

Dr. Fitzjames Moloney (*Brit. Med. Journ.*, Oct. 29, 1887) recommends that the diphtheritic membrane be removed from the fauces, and a piece of cotton wool or sponge saturated in liquor arsenicalis is then to be applied to the denuded surface. One of the easiest ways of detaching the false membrane is by means of a brush with wire bristles. The liquor arsenicalis should be applied every four hours. Dr. Moloney does not claim for this



treatment any specific action, but it has a beneficial action on the condition of the throat, and its action in removing the factor of the throat is more lasting than that of other antiseptics.

### **23. Treatment of diphtheria by benzoate of soda and sulphide of calcium.**

Dr. Brondel, of Algiers (*Bulletin Gén. de Thérap.*, Nov., 1887) writes after three years' trial of the following treatment: Every hour a tablespoonful of a solution of benzoate of soda, of the strength of 4 or 5 parts in 150, according to the age of the child; at the same time  $\frac{1}{6}$  to  $\frac{1}{8}$  grain of sulphide of calcium is given in powder or in syrup. He also irrigates the throat with a 10 per cent. solution of benzoate of soda every half hour, this being kept up night and day in grave cases. He remarks that the treatment must be rigorously carried out with an unflinching severity. Under it the false membrane whitens, loses consistence, gets more gelatinous, and disappears.

### **24. Treatment of diphtheria by pilocarpine.**

In the *Journ. de Méd. de Paris*, Feb., 1887, Dr. Lax records the treatment of ten children treated by hydrochlorate of pilocarpine; some of the cases were of severe type, but all recovered; the false membranes became soon expelled, and the fever lessened. All the children thus treated recovered. The following formula was prescribed:—Hydrochlorate of pilocarpine, 3 to 6 grains; Pepsin,  $\frac{1}{3}$  to  $\frac{1}{4}$  grain; Distilled water, 70 grammes; Hydrochloric acid, 2 to 3 drops. The pepsin was added for its solvent effect.

With reference to this treatment Dr. Lewis Smith's statement (*Med. News*, April, 1887) should be borne in mind, that he has witnessed dangerous consequences from administration of pilocarpine, such as extreme dyspnoea, and the drug appears dangerous in early stages of diphtheria.

### **25. Treatment of diphtheria by inhalations of eucalyptus.**

Dr. M. Bonamy (*Bulletin. Gén. de Thérap.*, p. 364, 1887) recommends certain principles of treatment, viz. (1) application of lemon juice to the membranous patches; (2) chlorate of potash drinks; (3) tonics, quinine, champagne, coffee, &c.; and (4) eucalyptus vaporisations. These can be produced by means of a spray, which he recommends to be used periodically and constantly, according to the circumstances of the case. In private practice he uses large basins, in which the boiling infusion should be renewed every quarter of an hour, the important point being to rapidly saturate the air with the eucalyptus. The result is liquefaction and expectoration of the false membranes.

Of fifteen cases thus treated only three died.

## **26. Treatment of diphtheria by early tracheotomy.**

Mr. Watson Cheyne (*Brit. Med. Journ.*, March, 1887) attributes the disease to a micro-organism which penetrates the mucous membrane of the throat, and grows and spreads, leading to exudation of fibrinous material. Ptomaines are produced and absorbed, producing the constitutional symptoms. He regards the disease as a local one from the first, and the treatment he advocates is to remove as much as possible of the false membrane by the forceps, and then apply a solution of bichloride of mercury (1 in 500) by a brush. If the patient be old enough a gargle of bichloride may also be used. He advocates early tracheotomy, the operation being done directly the larynx has become affected. From various considerations mentioned in his article, he has been led to the belief that the indication for tracheotomy in diphtheria ought not to be obstruction of the respiration, but that tracheotomy ought to be performed in cases of diphtheria as soon as it is certain that the larynx is affected, chiefly with the view of preventing the spread of the membrane downwards. The trachea must be opened more freely than usual, so that its interior is open to inspection, and the cricoid cartilage will often require to be divided. The subsequent treatment consists in removal of all membrane that can be reached, and the continual application of bichloride of mercury or carbonate of soda solution to prevent further formation.

## **27. Intubation of the larynx in diphtheria.**

Dr. O'Dwyer, whose treatment of laryngeal obstruction by the introduction of a tube was recorded in the last "Year-Book," contributes to the *Med. Record*, Nov. 7, 1887, an article based on his experience of fifty cases thus treated in private practice. He writes, "Nothing could be more erroneous than the prevalent opinion that it is an easy matter to place a tube in the larynx; apnœa from prolonged efforts at introduction may occur, but there is little danger if the operator be experienced, only ten or fifteen seconds being required; in one case where force was used the tube was pushed through the ventricle of the larynx into the cellular tissue; in another it was passed through the anterior wall of the œsophagus. Among "unavoidable accidents," pushing down the membrane before the tube in sufficient quantity to produce asphyxia; also the tube may become blocked by masses of membrane, and a case is reported of death from this accident; occasionally the tube is suddenly coughed out before the obstruction has been permanently relieved, but the dyspnœa is usually relieved for several hours after. **Stoerck** (*Centralbl. f. Kind.*,

April, 1887) has found intubation useful, and the tube borne for hours without interfering with the swallowing of food. (See page 187.)

## 28. Summary.

It cannot be said that any important addition has been made during the last twelve months to our means of treating the various exanthematous fevers. A new antifebrile agent, acetphenidine (p. 127), has been tried and recommended, but the recorded trials of it are neither numerous nor detailed enough to allow of a judgment being formed of its merits.

The application of antifebrin (or, as it is better called, acetanilid, in order to prevent confusion between it and antipyrin) to antithermic therapeutics was noted and commented upon in the last "Year-Book." Since that time it has been very largely made use of. The chief reports on its effect are by **Cahn and Hepp** (*Berl. klin. Wochens.*, Jan. 3 and 10, 1887); **Krieger** (*Centralbl. f. klin. Med.*, Oct. 30, 1886); **Fränkel** (*Deutsche med. Wochens.*, Nov. 4, 1886); **Eisenhart** (*Münch. med. Wochens.*, Nov. 23, 1886); **Riese** (*Deutsche med. Wochens.*, Nov. 25, 1886); **Lepine** (*La Semaine Médicale*, Nov. 24, 1886); **Grüneberg** (*Berl. klin. Wochens.*, Dec. 6 1886); **Hüber** (*Korrespondenzbl. f. schweizer Ärzte*, Jan. 1, 1887); **Heinzelmann** (*Münch. med. Wochens.*, Jan. 17, 1887); **Dr. Barr** (*Therap. Gazette*, Nov., 1887); **Dr. Widowitz** (*Wien. med. Wochens* June, 1887); **Dr. Bero** (*Lancet*, July 9, 1887); **Dr. S. Cohen** (*Med. News*, Oct. 8, 1887); **Dr. Dujardin-Beaumetz** (*Bulletin Gén. de Thérap.*, Aug. 15, 1887); **Dr. Weill** (*ibid.*, p. 150, 1887); **Tentschinsky** (*Rouss. Med.*, No. 6, 1887).

There is general agreement that acetanilid is very constant in reducing the temperature, its failure to do so in any disease being very rare; its action is very powerful, the temperature being lowered  $3^{\circ}$  to  $5^{\circ}$ ; the action begins within an hour of its administration, and is at its maximum in three to five hours; its action is unaccompanied by vomiting, and it is well borne by the digestive apparatus; the urine is usually increased in quantity and the pulse slowed, and some observers find the tension increased in proportion. But the fall in temperature is of short duration, and the re-rise is rapid; in addition, in some cases, the percentage of which is variously stated, the sweating with the fall of temperature is profuse, and cyanosis and collapse are also marked in some cases. The author, from many observations on its use in all the exanthemata and in other febrile conditions, would advise caution as to its use. While its action in some cases is very effective and grateful to the patient, he has seen it in several cases produce the most exhausting and profuse sweat-



ing and relaxation of arteries, and this in doses not exceeding 5 grains. In some cases the cyanosis produced is very marked ; it should not be given in doses of more than 3 grains to commence with, this being increased gradually if necessary with subsequent doses, and it should be withheld where there is much cyanosis with the pyrexia.

In the febrile diseases of children it is extremely well borne.

During the past year the routine treatment of fevers by antipyretics generally has been less insisted on than heretofore, and there appears a general inclination to admit that our present knowledge does not afford any means of aborting or shortening typhoid or other specific fevers. The main indications for antipyretic treatment should be the persistence of high fever without remissions or intermissions and the occurrence of hyperpyrexia, and the reagent made use of must be determined by the circumstances of the case. It will be found that the cold or gradually cooled bath will be often of service where antipyretic drugs cannot be used on account of profuse sweating or collapse, or the time they take before coming into action.

In the treatment of diphtheria especially the measures which have been put forward are very numerous, and for many it is claimed that they act as specifics. With regard to local applications, it must be remembered that before coming under treatment, or from the very first, the local deposit of membrane is beyond their reach, and that successful treatment and recoveries in case of exudation limited to the fauces or tonsils fail to prove the universal applicability of a particular re-agent. Among internal remedies oil of turpentine is highly lauded by several observers ; but the acrid taste is an objection to its use.

# GENERAL SURGERY.

BY FREDERICK TREVES, F.R.C.S.,

*Surgeon to, and Lecturer on Anatomy at, the London Hospital.*

---

## 1. The treatment of wounds.

It appears from a perusal of cases published in various quarters of the globe, that the carbolic spray is still further sinking into disuse for the treatment of operation wounds. It is still employed by some surgeons in operations upon the abdomen, in brain surgery, and in certain operations on joints, and in the treatment of some affections of the thorax. Of the complete Listerian dressing still less is heard. Corrosive sublimate, although still very extensively employed, does not appear to be received with the favour it once held. Its poisonous character, its action as an irritant, and its effect upon steel instruments, are once more urged against its very general use.

Solutions of boric acid are more extensively employed, especially for washing out large cavities, such as the abdomen and thorax. Salicylic acid is in much favour as an unguent in cases where an antiseptic ointment is required.

Iodol has been well tested by many surgeons, and appears to have failed to reach even a moderate standard of usefulness.

**Dr. Beck** (*New York Medical Press*, Aug., 1886) states that he has found it quite useless, that it is not a deodorant, and that it does not assist or protect the healing process.

Some authors still advocate the use of iodol, but with little convincing power. Notably among these is **Dr. Seiffert** (*Munchener med. Wochens.*, Jan. 29, 1887), who states that it answers admirably in the treatment of chronic tubercular and syphilitic ulcers, being especially useful in ulcers of the larynx. **Dr. Mazzoni** (*Berliner klin. Wochens.*, No. 71, 1886) is also a believer in iodol, and uses as an injection in hydrocele a mixture of iodol 1, alcohol 16, and glycerine 34, with perfect and admirable faith.

Dry dressings, with or without antiseptic powders, are very

widely employed, and apparently with satisfactory results. For example, Dr. Heidenhain (*Berliner klin. Wochens.*, No. 34, 1886) suggests a dressing of dry cotton wool, evenly and firmly applied, as one of the best methods of treating chronic ulcers of the leg.

The use of iodoform has greatly increased, and the remarkable value of that remedy in surgery is fully demonstrated. An account of a recent discussion as to its value is appended, together with an account of certain new applications advised for wound treatment. Conspicuous among these is salol, of which, no doubt, more will be heard.

## **2. Is iodoform an antiseptic?**

This question has been warmly discussed in certain German medical journals. The principal contributors to the discussion are the following: Drs. Heyn and Rovsing (*Fortschritte der Medicin*, Nos. 2 to 9, 1887), Dr. Friedländer (*ibid.*), Dr. Poten (*ibid.*), Dr. Tilanus (*Munchener med. Wochens.*, No. 17, 1887), Dr. Ruyter (*Beilage zum Centralbl. f. Chirurg.*, No. 25, 1887). It was urged, on the one hand, that iodoform was neither a germicide nor an antiseptic. It was shown that bacteria were not destroyed when brought in contact with the drug, and that germs developed freely in media containing iodoform. It was shown, indeed, that even 50 per cent. of iodoform did not interfere with germ life. The truth of these experiments, which were conducted in a laboratory, was not disputed, but it was urged and proved that the conclusions deduced therefrom did not hold good for iodoform when in contact with the body. When mixed with fluids and maintained at the temperature of the body iodoform proved a potent germicide. Bacteria that were growing on a laboratory mixture of iodoform were destroyed when the temperature was raised to body heat and a purulent fluid was added. It appeared that under this influence, aided by moisture and heat, the micrococci of pus had the power of decomposing the iodoform and of setting iodine free. The discussion has resulted in demonstrating the value of the drug, and its power as a germicide, when used in connection with wounds and suppurating surfaces.

## **3. Iodoform poisoning in surgical practice.**

Mr. Treves (*Practitioner*, October, 1886) draws attention to the conditions under which iodoform poisoning occurs in connection with the treatment of wounds, and the means whereby this occurrence may be avoided.

The susceptibility of individuals to iodoform varies remarkably. Poisoning would appear to be more apt to occur in old and in young patients than in those in middle life. Symptoms may appear after the first application, or, on the other hand, may not manifest



themselves until the powder has been used for weeks. Absorption with poisoning is not likely to occur from recent wounds unless they are of large size, nor from wounds that are sloughing or suppurating profusely.

The circumstances that are apparently most favourable to iodoform poisoning are these: (1) The wound is clean and granulating, and the powder is liberally applied. (2) The iodoform is introduced into an abscess cavity, or into a sinus, or fistula, or confined space. (3) The powder is applied under pressure, or is surrounded by a more or less impermeable dressing. (4) The drug comes in contact with a mucous surface, as may be the case in dressing a colotomy wound.

The symptoms of iodoform poisoning as met with in surgical practice may be divided into two categories. In one case the symptoms develop slowly. There are malaise and loss of strength with great depression of spirits, slight fever, an unusually rapid pulse, headache, and some slight wandering at night. In time the patient becomes apathetic and melancholy. His memory is distorted; he dreads some impending danger; he becomes weaker, dirty in his habits, and sinking into a state of more or less complete hebetude, dies. The symptoms in such a form of poisoning may be extended over weeks or months. In the second class of case the symptoms are acute, and may develop with some suddenness. There are malaise, headache, vertigo, sleeplessness, and delirium. The temperature is high, and the pulse may run to 150 or even 180. There is vomiting and loss of appetite. The delirium increases, is associated with hallucinations, and may pass into acute mania. The patient wastes, and may die within a comparatively short time of exhaustion attended by coma.

#### **4. Corrosive sublimate in surgery.**

Prof. Krönlein (*Korrespondenzblatt f. schweizer Ärzte*, No. 3, 1887) gives his experience of corrosive sublimate in the surgical clinic at Zurich. He considers that corrosive sublimate stands at the head of all antiseptics for surgical purposes. With regard to its poisonous qualities he thinks that, if properly used, it is less dangerous than carbolic acid.

The strength of the solution used for general purposes is 1 in 1,000. For the instruments a 3 per cent. solution of carbolic acid is employed. For large wounds, for cases of empyema, for laparotomy, for washing out large cavities, for rectal operations, and for operations on children and weakly persons, a solution of 1 in 2,000, or 1 in 3,000, is used. Sublimate catgut, sublimate silk, and sublimate wool are alone used.

Out of a series of 393 large operations there have been only

forty-three deaths, and of this number but four have been due to septicæmia.

### **5. The preparation of solutions of corrosive sublimate.**

Prof. Anderer (*Centralbl. f. Chirurgie*, No. 7, 1887). If distilled water is not used in the preparation of sublimate solution for surgical use a sediment will form after a time, which is found to be composed of insoluble mercurial compounds. These compounds are brought about by the presence of carbonates of the alkaline earths in ordinary pump water. If one grain of chloride of sodium is added to each grain of corrosive sublimate, the solution remains perfectly clear, and its antiseptic properties are in no way impaired. The author employs tablets of "sublimate sodium chloride," which insure exact dosage, easy transportation, perfect solubility, and the ability to use non-distilled water.

### **6. Salol in the treatment of wounds.**

Dr. Georgi (*Berlin. klin. Wochens.*, Nos. 9 and 11, 1887), Dr. Seifert (*Centralbl. f. klin. Medicin.*, April, 1887), MM. Perier and Patein (*Revue de Chirurg.*, July 10, 1887). Salol is a name given to the salicylate of phenol. It takes the form of a white crystalline powder, possessing a faint aromatic smell. It is without taste, and is insoluble in water. It is said to be non-poisonous and non-irritating, and to be cheaper than iodoform. It is said that in the treatment of wounds and ulcers it is as active as iodoform, and has advantages over that powder, in being cheaper, non-poisonous, and without offensive smell. The French writers above-named claim that it will replace iodoform in surgery. It is used precisely in the same manner as that drug, and its application has been attended with most excellent results.

It has been used with advantage as a dusting powder in facial erysipelas, as an insufflator in ozæna, and as an application in cases of stomatitis and diphtheria.

### **7. Photoxylin in the treatment of wounds.**

Dr. Ed. Wahl (*St. Petersburger med. Wochens.*, No. 20, 1887) strongly recommends the photoxylin used by photographers. It is employed in the form of a 5 per cent. solution, and is dissolved in equal parts of ether and alcohol.

It has these advantages over ordinary collodion: (1) It is remarkably adhesive, attaching itself so closely to the skin that for a considerable time it is affected neither by fluids nor washing. (2) It is perfectly impenetrable to fluids. (3) It contracts in such a way as to compress the tissues equally.

It is applied in the simplest way. The wound having been sutured and all blood stopped, the parts around are then dried.

Over the incision is placed a thin layer of absorbent wool that has been dipped in a solution of photoxylin, and the dressing is complete. In most cases no drainage tube need be used. This measure answers very well for small, simple wounds. It is especially well adapted for the wound made in laparotomy, and may constitute the only dressing. It will resist the action of fluids for from eight to ten days. It is especially valuable in parts where the wound may be exposed to the chance of being wetted, *e.g.* in wounds in children, in plastic operations about the face, in operations in the vicinity of the genital organs. In the latter situation it will quite protect the part from urine should the dressing become wetted thereby.

It gives great support to the wound, and in abdominal cases tends to prevent protrusion.

### **8. Tannin as a dressing.**

**Dr. Hutton** (*Journ. of the American Med. Association*, April 30, 1887). The author has used tannin in the treatment of wounds for sixteen years, with results that are perfectly satisfactory to himself. The wound is simply kept dusted with the dry powder. No other dressing is employed. It is especially suited to incised wounds, to small recent lacerated wounds, and to wounds of moderate size in compound fractures. (It must be owned that these are wounds that will heal up under almost any dressing.) The author claims that his dressing is convenient, cheap, clean, and efficient.

### **9. Subiodide of bismuth for wounds.**

**Dr. Reynolds** (*Med. News*, Oct. 9, 1886) states that subiodide of bismuth forms a perfect dry dressing for wounds. It is applied as a powder. The author has found it of especial value in the treatment of chronic ulcers.

### **10. Antipyrin in the treatment of ulcers.**

**Dr. Bosse** (*Berliner klin. Wochens.*, No. 33, 1886) writes that antipyrin has a remarkable effect in stimulating the growth of granulations, that it is in consequence of great value in the treatment of chronic ulcers of the leg, and that its effects show themselves in from four to fourteen days. Dr. Bosse has treated thirty cases with good result, but as the ulcers are treated at the same time very liberally with nitrate of silver, the action of the antipyrin may well be doubted.

### **11. Anæsthetics.**

**Dr. Schreiter** (*Centralbl. f. Chir.*, No. 12, 1887) discusses the value of a mixture of laughing gas and oxygen for the production of anæsthesia in short operations. The oxygen is used in the proportion of 20 per cent. The points in favour of the mixture



are the following: It has the narcotising effects of laughing gas, although in less degree. During its administration there is less oppression of breathing, less dyspnoea, and less venous engorgement. On the other hand, the mixture is expensive. The preparation of pure oxygen is attended with some difficulty. A greater quantity of the mixture has to be used to produce anaesthesia, and the effects are more evanescent.

It would appear from this report that the advantages of the mixture are outweighed by the disadvantages.

**Dr. Kreutzmann** (*Centralbl. f. Chir.*, No. 35, 1887) speaks enthusiastically of a mixture of chloroform and oxygen as an anaesthetic. A Junker's inhaler is used. The bottle is filled with chloroform in the usual way, but the end of the bellows-pipe, instead of being free in the air, is connected with a bag containing oxygen. Thus oxygen instead of air is pumped through the chloroform bottle, and the mixture so produced reaches the mask. Junker's mask is used, and the author allows that a certain amount of atmospheric air must reach the lungs between the mask and the face. This mixture has been administered in twenty-five operation cases, the ages of the patients ranging from seven years to fifty-six years. The effect in each case was most admirable. The advantages of the mixture over plain chloroform are: 1. Remarkably quick narcosis is produced. 2. Administration is less unpleasant to the patient. 3. Recovery from the anaesthetic is rapid and peculiarly easy. 4. There is no after-vomiting.

The procedure has one disadvantage. It is expensive.

## **12. Local anaesthetics.**

The use of cocaine has during the last twelve months been greatly extended.

**Dr. Wölfler** (*Wiener med. Wochens.*, No. 2, 1887) employs a 5 per cent. solution of cocaine. This he injects, not under the skin, but into the substance of the skin. If the injection is thus made, the anaesthesia produced is perfect. In operations upon inflamed parts (as upon whitlow) he finds it of little value, inasmuch as the puncture for the injection itself causes much pain. He has obtained no satisfactory results in the treatment of neuralgia by local cutaneous injections of cocaine. Dr. Wölfler states that cocaine poisoning has but rarely followed the use of the drug, and that the best antidote is nitrite of amyl.

**Dr. Schustler** (*ibid.*, No. 4, 1887) has performed some eighty operations under the local influence of cocaine. These include the removal of tumours of various kinds, herniotomy, circumcision, and amputations of fingers and toes. A 10 per cent. solution is used, which is injected into the skin and not under it.

The effects in all cases have been most satisfactory. The drug has, however, failed in large amputations. Dr. Schustler has found it the only anæsthetic necessary in operations upon fissure of the anus and fistula, and in the removal of nails.

Dr. Fränkel (*ibid.*, No. 5, 1887) has found a 1 per cent. solution of cocaine quite strong enough to produce local anæsthesia by injection. The effects of the drug are very limited, and the author employs multiple punctures, but a small injection being made at each point.

The publication of the above papers led to numerous contributions on the subject of cocaine as a local anæsthetic. The following are the authors of these contributions: Spitzer, Chiari, Fillenbaum, Lustgarten, Fux, Frey, and Hoffmann (*Wiener med. Wochens.*, Nos. 6 to 16, 1887). They all speak in enthusiastic terms of cocaine in minor surgery. It is especially valuable in rendering mucous membranes insensitive during examination. For this purpose it has been used for the nose, pharynx, larynx, rectum, urethra, and vagina.

It has been used to render the passage of œsophageal bougies painless, and has been applied to the urethra preparatory to injecting strong applications. To mucous surfaces it has been applied in solution of a strength varying from 3 to 20 per cent. When used for any small operation it should be injected *into* the skin, not under it. It serves to deaden the sensibility of the skin before the application of the actual cautery. It has been employed with success in the treatment of pruritus ani and to allay the irritation of eczema. It has not proved of much value in the extracting of teeth, and appears to have been but of partial service in any but quite minor operations.

Poisoning is rare, and has only occurred after injections. The symptoms are vertigo, faintness, cold sweat, dilated pupils, a fluttering pulse, pallor, and, possibly, some spasm of the glottis. In no instance did the symptoms call for active treatment.

Dr. Reid (*Gaz. degli Ospitali*, Feb. 9, 1887) claims for drumin the position of a new local anæsthetic. Drumin is an alkaloid obtained from euphorbia. It acts locally upon the sensory nerves only. The author, however, does not adduce sufficient evidence to enable one to judge of the real value of this new remedy.

In the *Therapeut. Gazette of Detroit*, July 15, 1887, the pretensions of this new remedy are fully investigated, and are not found such as to render it worthy of confidence.

### **13. The drainage of pelvic abscesses by trephining the ilium.**

Prof. Rinne (*Archiv f. klin. Chirurg.*, Bd. xxiv., p. 842, 1887).

The difficulty of dealing with pelvic and iliac abscesses is well known. This depends to a great extent upon the intractable diseases of which an abscess in the pelvic region is merely one manifestation, and partly upon the difficulty of giving free and direct vent to the retained pus. The author directs his observations chiefly to iliac abscess, to collections lodged about the hollow of the ilium. These may depend upon disease of the adjacent bone, upon caries of the spine, or other conditions. The matter may be directly evacuated by trephining the ilium. The incision through the soft parts is made just above the great trochanter, and the bone may be divided by a chisel or a trephine.

Rinne gives two illustrative cases.

This measure can only be of avail in limited collections of pus situated in the iliac fossa, and especially in such cases as depend upon disease in the ilium itself.

The treatment could be of little, if any, service in pelvic abscesses due to visceral disease or to pelvic peritonitis, in abscesses due to tubercular processes, and in such as depend upon distant caries of the spine.

#### **14. Empyema of the antrum of Highmore.**

Prof. Miculicz (*Archiv f. klin. Chir.*, Bd. xxxiv. p. 626, 1887) recommends that, in cases of accumulation of pus within the antrum, the cavity should be perforated from the interior fossa of the nose. For the operation a strong double-edged knife is used. This knife, which rather resembles a stiletto, is fixed to a handle at an obtuse angle, and is provided with a stop in order that it may not penetrate too far. The instrument is introduced along the floor of the nose until the point of the perforator is just below the lower free edge of the inferior turbinated bone. By exercising strong pressure the antrum is opened at this point. The cavity can easily be washed out from this situation. Prof. Miculicz has dealt with four cases according to this plan, and has had in all an excellent result.

#### **15. Arsenic in the treatment of malignant tumours.**

Dr. Köbel (*Über die Arsenbehandlung maligner Tumoren*, Tübingen, 1886) deals further with this subject. (See "Year-Book of Treatment" for 1886.) The treatment was applied to all varieties of malignant disease. The arsenic was taken internally for months in increasing doses, and was also employed locally in the form of a subcutaneous injection. This drug was found to be quite useless in cancer, and in round and spindle-celled sarcomata of lymphatic glands. This point has been long established. A cure followed the use of arsenic in one case of multiple and rapidly-growing sarcoma, and in many cases of "malignant



lymphoma" (lymphadenoma). The first named case is remarkable. The patient was a man, aged thirty-six. During a few months no less than four tumours appeared at various parts. One developed in the right axilla, another under the left clavicle, with the result that the bone underwent spontaneous fracture; a third appeared on the acromion, and a fourth about the spine of the seventh cervical vertebra. Arsenic was administered by the mouth, and subcutaneous injections were used. The axillary tumour and that under the clavicle suppurated, and with the evacuation of the abscess the growths disappeared. The other two shrunk away without suppuration. The treatment was kept up for two months, and at the end of this time a new swelling was observed over the back. This was excised, and proved to be a spindle-celled sarcoma. In time recurrence took place in the cicatrix. It was now treated with injections of arsenic. It suppurated and necrosed, and entirely disappeared. At the time of the writing of the paper three years had elapsed, but the patient had shown no sign of a relapse.

In seven cases of non-leucæmic lymphadenoma the use of arsenic was attended with excellent results. Dr. Köbel has collected, in addition, fifty-nine recorded cases of this affection in which arsenic was employed. Of these fifty-nine cases the drug was administered by mouth and by injection in thirty instances. In twenty-four it was given by mouth only, and in five by injection only. In seventeen cases a cure followed after the treatment had been kept up for from one to six months. In at least five of these patients some recurrence took place at the termination of several months. The growth, however, appears to have again yielded to arsenic. A diminution of the tumour was noted in fourteen cases out of the fifty-nine. In the remaining twenty-eight cases the drug was attended with no benefit.

This treatment is well worthy of consideration. During the present year I brought the subject before the Clinical Society, with the results of my experience. The treatment is uncertain. It seems to be of no avail in children, and to answer best in subjects about or past middle life. I have found it only of good in examples of non-leucæmic lymphadenoma. With existing leucæmia I believe it to be useless. The dose must be gradually increased and pushed to the extreme. The treatment must be persisted in for months. I have associated the treatment with no local measures, and would not recommend injections of arsenic. With scrofulous gland swellings arsenic is of no avail. It is to be regretted that the clinical classification of lymphatic tumours is still so confused.

## 16. Sarcoma of the breast.

Dr. Samuel Gross (*Internat. Journ. of the Med. Sciences*, July, 1887) has published a valuable monograph on Sarcoma of the Breast, based upon a study of 150 cases. The following are the more important points that bear on the question of treatment.

Out of ninety-one cases submitted to excision a cure may be claimed to have followed in thirty-two instances, the patients being alive and well an average period of four years after the operation. In the remaining cases (64·8 per cent.) recurrence took place. In forty-two of these the recurrence was local only. In seventeen, metastatic deposits formed. More than 50 per cent. of the recurrences took place within six months of the operation; 28 per cent. appeared after twelve months; 8 per cent. after two years. The latest date at which a recurrence took place was four years from the time of the operation.

The prognosis, therefore, in a case where no relapse has occurred for two years after the excision is relatively very good. Local reproduction is most rapid in round-celled sarcoma, less rapid in spindle-celled, and least rapid in the giant-celled variety.

The tumours containing cystic formations are much more malignant than those without cysts. A sarcoma occurring in a functionally active breast, *i.e.* before thirty-five years of age, is likely to recur locally after operation, but is little disposed to metastasis; whereas a sarcoma of the declining breast, *i.e.* after thirty-five years of age, is less likely to recur locally, but is much more frequently generalised.

The following table seems to illustrate in a striking manner the difference between the prognosis in cancer and that in sarcoma:

	SARCOMA.	CARCINOMA.
Invasion of skin by tumour ...	9·6 per cent.	68·9 per cent.
Invasion of chest walls ...	3·8    "	21·5    "
Invasion of axillary glands ...	0·6    "	67·3    "
Local recurrence after removal...	58·2    "	81    "
Metastasis found post-mortem ...	60    "	50    "
Average duration of life ...	81 months	39 months
Permanent cures ...	13·2 per cent.	10·4 per cent.

Dr. Gross thus sums up the question of treatment. "The entire breast, along with any skin that may be invaded, must be extirpated, especial care being paid to the complete removal of every particle of paramammary fat and the fascia of the pectoral muscle, in which tissues experience shows that recurrence takes place. In the event of recurrence the growths should be freely

excised as fast as they appear. This practice prolongs life, averts visceral contamination, and occasionally brings about a cure."

### **17. The treatment of effusion of blood into the knee joint.**

Dr. Bondesen, of Copenhagen (*Centralbl. f. Chirurg.*, No. 3, 1887) has published a striking paper upon this subject. Effusion into the knee joint forms one of the commonest accidents that find their way into hospital wards. It must be confessed that the treatment of this simple condition is often tedious and protracted, and even after long-continued rest is not always quite satisfactory.

Dr. Bondesen compares the ordinary "conservative" treatment with the treatment by puncture. By the former is meant rest upon splints, with the use of ice-bags, compressing bandages, and friction. By the latter, an antiseptic puncture of the joint, whereby the effused blood is evacuated. In addition to the puncture, the joint was in some few of the cases subsequently washed out with a weak solution of carbolic acid and corrosive sublimate. The limb was, of course, kept upon a splint. Out of 119 cases admitted into the General Hospital at Copenhagen, fifty-seven were treated by puncture, and sixty-two by the conservative method.

(1) Fifty-seven cases treated by puncture: average duration of treatment, 22·4 days. Forty-nine (86 per cent.) were discharged completely cured; and eight (14 per cent.) "incompletely cured." Out of the forty-nine cases, twenty-six were discharged between the tenth and twentieth days, and twenty-three between the twentieth and fortieth days.

(2) Sixty-two cases treated without puncture: average duration of treatment, 38 days. Thirty-nine (62·9 per cent.) were discharged completely cured; and twenty-three (37·1 per cent.) "incompletely cured." Out of the thirty-nine cases, eight were discharged between the tenth and twentieth days, twenty between the twentieth and fortieth days, and eleven between the fortieth and 125th days.

By the term "incomplete cure" is meant that the patient left the hospital with still a little fluid in the joint, and with the function of the articulation still imperfectly restored.

The author states that in no single instance did any complication follow the puncture. He claims that by evacuating the joint no especial risk is run, the treatment is greatly shortened, and the results are more satisfactory. The chief point for consideration is the amount of risk to which the patient is exposed when the knee joint is submitted to puncture. My impression is that it is



somewhat greater than the author thinks. In careful hands the measure is probably safe enough; but if the treatment became very generally adopted, one would not have long to wait for an example of suppuration of the joint as the result of puncture. The author does not point out that to the operative procedure must be added, in the majority of the cases, the risk of an anæsthetic.

### **18. Reduction of shoulder dislocations.**

Dr. Macleod (*Brit. Med. Journ.*, vol. i. p. 507, 1887) claims for the method of reduction he describes the following advantages. It is easy, rapid, painless, needs no anæsthetic, apparatus, nor assistants, and probably does no injury to the joint. The method may be described as lateral extension in the supine position, and is thus carried out: Place the patient on his back on the floor with the arm at right angles to the body, and tell him to lie still and make no effort. The surgeon, sitting on the floor at right angles to the patient's body, places his heel in the axilla, quietly takes the limb by the wrist and upper arm, and pulls in a line at right angles to the line of the trunk, at first gently, and then with gradually increasing force, the arm being still on the floor, or but slightly raised from it. As reduction may take place without any intimation, to ascertain if this has occurred the hand may be placed on the joint, or the limb adducted. If necessary, repeat the traction with a greater degree of force, and should all the force that can be applied short of giving pain, fail, gentle rotation of the limb, first in one direction and then in the other, can also be made with traction.

The supine position is the only one in which the muscles are completely relaxed. The abducted position removes all strain from the deltoid, and the limb is placed in the same posture, probably, that it occupied at the time of the accident.

### **19. The treatment of subluxation of the jaw by operation.**

Prof. Annandale (*Lancet*, vol. i. p. 411, 1887) has demonstrated that this condition is due to displacement of the interarticular cartilage. Such displacement is most common in delicate women, and is due either to inflammatory changes of a simple gouty or rheumatic nature, or to a sudden tearing or gradual stretching of the connections of the cartilage. Professor Annandale proposes to relieve the condition by an operation similar to that which he has described for the relief of displaced semilunar cartilage of the knee joint. An incision slightly curved, about three-quarters of an inch in length, is made over the posterior margin of the external lateral ligament of the joint, and is carried down to the capsule. Any small bleeding vessel having been secured, the

capsule is divided, and the interarticular cartilage is seized, drawn into position, and secured to the periosteum and other tissues at the outer margin of the articulation by a catgut suture. Two illustrative cases are given in women aged respectively thirty-eight and eighteen. In both the condition was perfectly relieved.

In very few of these cases can any operative treatment be necessary. The amount of inconvenience occasioned is slight, and is often met by some simple contrivance on the patient's part. Should the condition, however, call for interference, then the present operation leaves nothing to be desired.

## **20. Amputation in diabetes.**

Professor König (*Centralbl. f. Chirurg.*, No. 13, 1887) has dealt fully with the question of amputation in diabetes. He points out that diabetic patients are liable to a low form of inflammation; that their tissues present a favourable nidus for the development of micro-organisms, and show a ready disposition to necrose. He suggests that in all cases of apparently spontaneous gangrene, or of gangrene from trifling causes, the urine should be examined for sugar. In inflammatory affections, in necrosis, and in gangrene occurring in diabetic subjects, the first and most persistent treatment should be by the use of antidiabetic measures. Amputation should not be entertained until the diabetic symptoms are retrograde. If in spite of treatment and careful local antiseptic measures the local and general symptoms do not improve, then operation may be undertaken as a possible means of saving the patient's life.

## **21. Amputation at the knee joint.**

Mr. Bryant (*Med.-Chir. Trans.*, vol. lxxxvi. p. 163) advocates amputation by disarticulation at the knee joint in preference to the condyloid operation of Velpeau or the supracondyloid amputation of Stokes. It is assumed, of course, that the lower end of the femur is healthy. He gives thirty examples of this operation from his own practice. Three different methods are available: the long anterior flap of Pollock (*Med.-Chir. Trans.*, vol. liii. 1870); the lateral hooded flaps of Stephen Smith (*American Journ. of the Med. Sciences*, Jan., 1870); and the lateral flaps of Pick (*Proc. of Med. Soc. of London*, vol. vii. p. 134, 1884). Of these methods, that of Stephen Smith is greatly to be preferred, since it provides a better covering for the condyles of the femur than is obtained by any other method, and the flaps are far less prone to slough than in the long five-inch anterior flap advocated by Pollock. With Stephen Smith's flaps there is no place for bagging of fluids after the operation, and the flaps at the same

time form a complete hood to the condyles. The advantages of disarticulation at the knee joint over amputation through the thigh are formulated by Mr. Bryant as follows :

1. The lessened shock of operation.
2. The lessened section of tissues and the non-exposure of the muscular interspaces of the thigh.
3. The escape from the necessity of sawing the femur, with its attendant risks.
4. The preservation of the attachments of the thigh muscles, and consequently the greater mobility of the stump.
5. And last, but not least, the useful character of the resulting stump.

## **22. A new osteo-plastic amputation of the foot.**

Dr. Tauber (*Archiv f. klin. Chirurg.*, Bd. xxxiv. p. 287) describes the following amputation for the removal of the foot. The incision for the cutting of the flap is commenced on the outer side of the foot near the insertion of the tendo Achillis. It is carried transversely along the outer border of the foot below the malleolus. When the line of Chopart's joint is reached the knife is carried across the dorsum of the foot to the inner border of the same. Thence the incision runs to the centre of the sole, and from this last joint it is carried directly backwards and outwards to meet the commencement of the incision by the tendo Achillis. The knife is carried at once down to the bone along the whole length of the incision. The ankle joint is opened and all its ligaments divided. The astragalus is separated from the os calcis, and the foot is then disarticulated at Chopart's joint. Nothing is left behind but the os calcis. This bone is grasped by bone forceps, and is so twisted that its upper surface is made to look directly outwards. A sagittal section is then made of the bone with the saw, in such a way that the bone is bisected. The posterior tibial artery, and the insertion of the tendo Achillis, are preserved. A section is finally made of the tibia and fibula, and the sawn surfaces of these bones and that of the os calcis are brought together as in Pirogoff's operation.

The author claims that this procedure has certain advantages over Pirogoff's amputation. These claims are not difficult to maintain, but it is not evident that Dr. Tauber's procedure is superior to certain excellent modifications of "Pirogoff." For example, it can claim no advantage over the admirable operation known by the name of Pasquier-LeFort. The flap in the present operation is of awkward shape, and the skin incision must be a little difficult to adapt. The procedure is, however, very well suited, as the author urges, for cases where, from disease or



accident, there has been destruction of the soft parts over the outer side of the foot.

### 23. Excision of the knee.

Mr. Morratt Baker (*Brit. Med. Journ.*, vol. i. p. 321, 1887) points out the difficulty of maintaining the bones in position after this operation, and proposes the following procedure, which he has carried out with success: After the bone ends have been resected, the tibia and femur are fixed together by means of two strong steel pins. These are made to transfix the tibia and bury themselves in the femur. They are so introduced that they cross one another in the figure of St. Andrew's cross. The tibial end of the pin is left projecting beyond the skin. The pins are removed as soon as they become loose. This may occur at the end of a few days, or not for a period of from four to seven weeks. The paper concludes with fourteen illustrative cases.

Mr. Howard Marsh (*ibid.* p. 389) favourably considers Mr. Baker's operation. He recommends the splints described in Gant's "Practice of Surgery" (2nd edition, vol. i. p. 16), and employs bone pins instead of those made of steel. Ordinary bone knitting needles are used. The holes in the tibia are bored by means of a bradawl, the ends of the knitting needle are sharpened, and when they have transfixed the tibia, are driven into the femur by a few taps from a mallet. The pins are cut short and are left permanently in the bone. Mr. Marsh has used these bone pins combined with Mr. Gant's splint in nine cases.

There is no doubt but that the treatment here advocated forms a very valuable aid to the present operation.

Dr. Wight (*Med. and Surg. Reporter*, Philadelphia, March, 1887) uses a screw for the purpose of fixing the bones together after excision of a joint. The screw is 3 to 4 inches in length and  $\frac{1}{8}$  inch in width. The bones are first drilled in order to make a way for the screw, which is introduced in the usual manner. After the parts have become fairly consolidated the screw is removed.

The use of this large foreign body does not commend itself, and does not compare favourably with the methods of Morratt Baker and Howard Marsh.

### 24. Goitre treated by injection.

M. Comby (*Progrès Médical*, Jan., 1887) advocates the treatment of goitre so extensively carried out by M. Duguet. All forms of goitre are treated by injections of iodine. Of thirty-four cases so dealt with, twenty-one were cured, seven were relieved, and in the remainder the result was not ascertained. In recent goitres, no matter whether solid or cystic, a small number of

injections sufficed to effect a cure. In goitres of old standing, the injection has little effect. The tumour may become smaller or may remain unaffected. Pure tincture of iodine is used, and is introduced by a Pravaz's syringe. The injections are repeated at intervals of about eight days. A good deal of disturbance may follow the injection, viz. rigors, headache, fever, great swelling of the neck, with pain and much dysphagia.

MM. Terrillon and Sebileau (*Archives de Med.*, Jan., 1887) are also strongly in favour of Duguet's treatment. They use pure tincture of iodine and adopt the method already described. They have had excellent results. The treatment is tedious. For a goitre of medium size, from two to six months will be required to effect a cure.

### 25. Bone grafting.

Dr. Marshall (*Journ. of the American Med. Assoc.*, March 26, 1887) reports the following case: A woman, aged twenty-six, had had a large portion of the lower jaw removed for supposed sarcoma, at the age of seventeen. No union had taken place after the operation, and the jaw from the first bicuspid tooth backward to, and including half an inch of, the ramus was absent. Much neuralgia was present. After mechanical means had failed, the following operation was performed: The gap between the bones (measuring one inch and a half) was exposed, and the ends of the fragments were bared and scraped. Twelve small pieces of bone, ranging in size from two to six lines in length, two to three lines in width, and one line in thickness, were now cut from the femora of a living half-grown rabbit. The pieces were removed from the epiphyseal extremities, and had the periosteum still attached. These fragments having been dipped in a warm solution of corrosive sublimate, were placed in contact with the denuded ends of the jaw-bone. The wound healed well, without the formation of a drop of pus, and so far the operation appears to be likely to prove a success.

### 26. Tendon grafting.

M. Peyrot (*Bull. et Mem. de la Soc. de Chir. de Paris*, tome xii. p. 356). A boy, aged fourteen years, accidentally cut both flexor tendons of the left middle finger. Six months had elapsed. Flexion in the finger was lost, save so much as was exercised by the interossei. Peyrot cut down upon the part, and found the tendons separated 4 cm. He implanted between their ends a piece of tendon from a living dog. This was fixed *in situ* by catgut sutures. The wound healed well, and the animal tendon became incorporated. Owing, however, to the existence of adhesions and the obliteration of the synovial sheath, there was little improvement in movement.

Although the operation failed to secure its end, yet as an example of tendon grafting it is of interest, inasmuch as the grafting was quite successful.

### **27. Fracture of the olecranon.**

Dr. Schüssler (*Centralbl. f. Chirurg.*, No. 15, 1887) treats simple transverse fractures of the olecranon by a method that has long been in use in connection with fractures of the patella. The effusion into the joint is evacuated by an antiseptic puncture, and the limb is put up on a splint in the position of full extension. When the puncture has healed the fragment is adjusted by loops of strapping. Extension is maintained for five weeks. In the illustrative cases given a good result followed.

### **28. Ligature of the inferior thyroid artery.**

Dr. Drobeck (*Gaz. alarska*, No. 6, 1887) discusses the operation of ligature of the inferior thyroid artery for goitre. He points out the difficulties that attend the procedures of Velpeau and Langenbeck for securing this vessel. The incision is made along the posterior margin of the sterno-mastoid muscle. It commences from 1 to 2 cm. above the clavicle and extends to the level of the summit of the thyroid cartilage. The platysma having been divided, the external jugular vein is exposed. The surgeon now deepens the incision and searches for the anterior scalene muscle. This structure must be well exposed, and it may be necessary to remove some of the lymphatic glands that lie upon its surface. Great care must be taken of the phrenic nerve which now comes into view. The ascending cervical artery is also exposed, and by following this vessel the inferior thyroid artery is reached. The principal landmark for this artery is the carotid tubercle. The vessel arches above this process. In adults it lies 1 cm. above the process, and in young patients from 2 to 3 cm. above it. The trunk of the vessel is in close contact with the inner border of the anterior scalene muscle. Before the vessel is exposed, the jugular vein and common carotid artery must be drawn towards the middle line, and care must be taken not to damage the vertebral vessels.

It is questionable how far this operation may be of use in practice. As a means of securing the artery it has distinct advantages over previous methods.

### **29. The surgical treatment of internal aneurysms.**

Mr. Pearce Gould (*Lancet*, vol. i. p. 776, 1887) introduced into the sac of an aortic aneurysm thirty-two feet of steel wire. The tumour proved to be a sacculated aneurysm arising from the first part of the arch of the aorta. The patient was a man, aged forty-eight. The wire was passed through a Southey's cannula, introduced in the third



intercostal space. A good deal of blood was lost during the operation. The patient died on the eighth day, the skin over the aneurysm having become gangrenous. The wire, together with loose fibrinous clot, formed a very dense mass, nearly filling, but not adhering to, the sac.

Dr. White (the physician in charge of the case) and Mr. Gould submit the following conclusions: 1. Moore's treatment is worthy of further careful trial in properly chosen cases. 2. The operation should be performed before there is reason to suspect rupture of the sac. 3. Only a small quantity of wire should be introduced at a time. 4. No firm pressure should be made over the aneurysm afterwards.

Mr. Hulke (*ibid.* p. 776) gave an account of the case of a man with a subclavian aneurysm involving the first part of the artery. Ordinary treatment having failed, thirty-three feet of steel wire was introduced into the sac. The patient died thirteen days after the operation.

Dr. Abbe (*The Med. News of New York*, April 9, 1887) introduced 100 feet of aseptic No. 1 catgut into the cavity of a large dissecting aneurysm of the right subclavian artery. A temporary benefit followed. As the aneurysm again increased after a few days, 150 feet of fine sterilised steel wire were introduced through an insulated aspirator needle. The positive pole of a galvanofaradic battery was attached to the extremity of the wire, while a copper plate covered with wet cotton, and connected with the negative pole, was placed over the back. A current of fifty milliamperes was used. The operation lasted one hour. For twenty-four hours decided hardening of the tumour was noted, then it rapidly increased, death resulting on the second evening from rupture into the trachea.

Dr. Ranschoff (*New York Med. Record*, p. 481, Oct. 30, 1886) publishes this case. The patient was a negro of thirty-five, suffering from sacculated aneurysm of the ascending aorta, with perforation of the chest wall, unattended by atheroma or cardiac hypertrophy. A brief and non-successful trial was made of rest, low diet, and iodide of potassium, and later of ergotin subcutaneously. It was then determined to insert a coil of wire into the sac. The material used was flexible silver wire. On June 13, 1886, a straight hollow needle, with thumbscrew attachment, was pushed into the aneurysm from the right side. Ninety-six inches of the wire were then introduced into the aneurysmal sac without any technical difficulty. The pain experienced was very slight, and during the introduction of the first four feet of wire the pulse continued unchanged. It suddenly became almost imperceptible

and very rapid. The patient complained of great faintness, and it appeared that death was imminent. After the administration of several injections of whisky the pulse gained in strength, and the remainder of the wire was introduced without further interruption. The end of the coil was pushed into the sac by a second piece of wire, which was withdrawn with the cannula. No hæmorrhage attended or followed the operation. An ice-bag was applied over the aneurysm and an opiate administered. On the day following the operation an amelioration of all the symptoms was noticeable. From day to day, for a period of two weeks, the condition of the patient gradually improved. The outer portion of the tumour had become quite firm, and fluctuation in it was no longer appreciable. In the last days of June a change for the worse supervened; increased pulsation with greater prominence of the internal segment of the tumour. In the hope of consolidating this part of the sac, a second operation was performed on the 5th July, whereby ninety-eight inches of wire were inserted into the sternal portion. Considerable pain, but no distress attended this operation, but the symptoms remained unchanged. Post-mortem it was found that the aneurysm had ruptured into the right pleural cavity. In the upper and outer third of the sac was found a firm laminated clot of considerable thickness, and adherent to the sac wall. The walls of the remaining portions of the aneurysm were covered with a thin layer of fibrin, the interior being filled with soft coagula of recent formation. Throughout the sac of the aneurysm, embedded in firm and recent clots, were numerous coils of silver wire. One of these rested just above and in close relation to one of the leaflets of the aortic valve. Near the seat of rupture no wire was found.

Dr. Shingleton Smith, of Bristol (*Bristol Med. Journ.*, Dec., 1886) reports an important case of aneurysm of the ascending aorta, which was systematically treated by galvano-puncture with encouraging results. The patient was a married woman of twenty-nine with an aneurysm of the commencement of the arch of the aorta. The case was watched continuously throughout a protracted course of nearly four years. Iodide of potassium, in combination with rest and a limited diet, appeared to arrest the course of the disease; the symptoms abated, and the patient went home, after nine months' treatment. She was re-admitted three months after; the symptoms were again relieved; and she was discharged, fairly well, in a little over three months. Nine months later, galvanic treatment was commenced; first with one needle introduced into the sac; then,

a week later, with two needles, both attached to the positive pole, insulated except at the ends; five weeks later, two needles, as before; and after another interval of four weeks, two needles, again arranged as before, for the fourth time. There was then an interval of three months. The fifth operation was of a more energetic character. Four needles were introduced to a depth of two inches, two on the right and two on the left of the sternum. A current from thirty cells was maintained for half an hour, the negative pole being in contact with the skin by means of a sponge rheophore, the position of which around the tumour was frequently varied. On removal of the needles, no bleeding took place from those on the right; but there was copious oozing of black fluid blood from those on the left, which was at last arrested by collodion pads and pressure. During this operation the patient was profoundly unconscious and cyanosed; the breathing had been much distressed, and the chloroform had been discontinued after the first five minutes, and artificial respiration had to be carried on. Unconsciousness continued for two hours and twenty minutes, when the breathing power returned. The result of this operation was very encouraging, the condition of the aneurysm being greatly improved, and the patient being relieved of her more troublesome symptoms. Death happened from acute bronchitis about twelve months later. The aneurysm proved to be sacculated, and to involve the first and second parts of the arch, growing from the right front wall of the vessels. It was as large as a child's head at birth. The cavity contained much soft post-mortem clot; but a laminated mass of firm fibrine (one inch and a half thick) occupied the anterior portion of the sac, was adherent to the wall, and may have been the result of the numerous operations, as no laminated clot existed in any other part. No marks of the galvano-punctures could be detected in the walls of the sac.

### **30. Treatment of abdominal aneurysm by Loreta's method.**

Mr. Henry Morris (*Lancet*, vol. i. p. 775, 1887) dealt with a case of aneurysm of the upper part of the abdominal aorta in a man, aged forty-six, in the following manner, known as Loreta's method: Laparotomy was performed, and a cannula having been introduced into the aneurysmal sac, wire was passed through it. Owing to the depth at which the cannula was held, and the difficulty of steadying it, only one foot of wire was introduced before an insurmountable kink stopped its farther progress. The patient died of asthenia five days after the operation. There was no peritonitis. The aneurysm was found to be very saccular



and filled with clot, more than one-third of which was laminated and presumably due to the procedure adopted.

Dr. John F. Morse, of San Francisco (*Pacific Med. and Surg. Journ.*, February, 1887; and *Med. News*, March 5, 1887), reports a case of this nature. The patient, a man of thirty-two, who denied venereal infection and alcoholic excess, was struck violently in the abdomen, on the 4th March, 1886, by a coal bucket. This accident occasioned him at the time no serious inconvenience. A week later he began to suffer from vomiting and constipation, accompanied by intense pain in the back, sides, and abdomen, and he noticed for the first time a pulsating swelling in the abdomen. He was confined to bed for one month, and then came under the care of Dr. Morse, who diagnosed abdominal aneurysm, and ordered treatment of rest, low diet, and large doses of potassium iodide for three weeks. At the end of this time he left the hospital much improved. He continued his work for three months, but during this period the tumour grew larger, and the pain in the back became so intense that sleep could only be obtained by the use of opiates.

On November 17, 1886, an incision four inches long was made over the tumour through the linea alba. The aneurysm was exposed and found to be about the size of both fists. An exploring needle, one millimetre in calibre, was thrust into the sac, when a stream of arterial blood spurted through it. One yard and a half of one-half millimetre silver-plated copper wire was carefully passed through the needle into the aneurysm and the needle withdrawn. The slight hæmorrhage resulting was readily stopped by touching the small opening with pure carbolic acid and glycerine. The abdominal wound was closed.

After the operation the patient suffered several days from vomiting, but his temperature never rose above 101° F. The day following the operation the pulsation in both femorals was scarcely perceptible, but it soon appeared again. A week after the operation the pulsation over the tumour was very slight. Nothing of importance transpired until the 26th, when the patient complained of great pain in the left groin, and an examination revealed the left leg enormously swollen, œdematous, and cold, and no pulsation was to be felt in the left femoral. In the right femoral it was very feeble. The left leg was wrapped in cotton wool, and warm bottles applied. In two or three days the swelling had disappeared, the pulsation in the left femoral not reappearing.

On the twenty-sixth day the pulsation over the aorta was not stronger than over a normal aorta, and auscultation revealed no bruit in the sac, which was extremely hard to the touch. The

patient was ordered to remain quietly in bed, on his back, that the clot might become firmly consolidated.

On the thirtieth day pulsation over the tumour was scarcely perceptible, and no bruit was to be heard on auscultation. Patient was in excellent condition, and anxious to get up; the wound in abdomen was entirely healed; pulsation in left femoral had not returned, and was slight in right femoral.

On the forty-first day the patient had been up for a week. Pulsation had returned in the left femoral.

On the fifty-first day the patient left the hospital. Pulsation in tumour was again diminished; the tumour, reduced one-half in size at the time of operation, consisted of a hard nodule. No bruit. Scarcely any difference in pulsation of femorals.

This, the first successful case of the kind, proves, says Dr. Morse, the feasibility of Loreta's method of treating aneurysms of the abdominal aorta.

I believe this to be the first case of the kind where this plan of treatment has been followed by cure. In the other examples of Moore's operation the results show no improvement upon the earlier attempts. It appears to me that in these cases the actual amount of foreign matter introduced into the sac is greatly in excess of what is required.

### **31. The surgical treatment of affections of the pleura and lungs.**

A number of papers upon this subject have been published during the year. Their principal tendency is to more accurately define the precise conditions under which operation should be undertaken, and to point out the special procedure best adapted to each particular case.

Dr. Rochelt (*Wiener med. Presse*, No. 32, 1887) formulates the following conclusions: In acute pleuritic effusions the fluid should be evacuated without delay by means of the aspirator. In cases of chronic effusion the fluid should be withdrawn gradually by repeated tapplings. Empyema should be treated promptly by free incisions. Dr. Rochelt gives an excellent case of bronchiectasis cured by pneumotomy. The patient was fifty-four years of age, and the subject of chronic bronchitis. Portions of ribs having been removed, the lung was exposed, the cavity discovered, opened and drained. The case progressed favourably to a cure.

Two cases of lung abscess were treated by incision. Both died; while one case of gangrene, treated by the same measure, ended in recovery.

Dr. Kasanli (*Vratch*, Nos. 13 to 18, 1886) enters very fully into the subject of the treatment of empyema. He gives an

account of twenty-one cases of empyema treated by operation, the patients all being young soldiers under care in a military hospital. Out of this number ten died; five of tuberculosis, one of tetanus, one of pericarditis, one of pyæmia, and two of exhaustion. Of those who recovered (eleven in number), eight are reported as being perfectly cured, and three as recovering with a persisting sinus. The operation adopted in every case was the following: A rib is not removed. The fluid, especially when of large amount, is removed very gradually day by day through an aspirator. When the thorax is nearly empty an incision is made into the cavity under antiseptic precautions, and a drain introduced. The free end of the drainage tube is conducted into a vessel containing a solution of corrosive sublimate. A clamp is applied to the tube so as to allow of the slow discharge of the pus. In twenty-four hours the wound is enlarged still more, and free drainage with an open tube is carried out for the first time. The tube is removed, on an average, on the thirty-fourth day. Recovery may be expected by the forty-fourth day.

Most authors, to judge from isolated reported cases, are disposed to advise very gradual evacuation of the fluid, and to limit resection of ribs to a very few cases. In children it would appear that simple incision with free drainage is quite sufficient, while in adults not a few surgeons would only counsel resection of ribs in cases where a relapse has occurred.

It is noticeable in the reported cases that a washing out of the pleural cavity is less frequently employed, and that that measure is also only adopted when the discharge has become putrid.

**Mr. Rickman Godlee** (*Lancet*, March 5, 1887) deals with the surgical treatment of pulmonary cavities. He gives the following as the conditions in which surgical interference may be, or has been, attempted: 1. Tubercular cavities. 2. Cavities resulting from gangrene of the lung. 3. Cavities resulting from the bursting into the lung of abscesses or other collections of irritating matter from without. 4. Bronchiectases, from whatever cause arising, and including those which depend upon the presence of a foreign body in the air passages. Gangrenous cavities resulting from some form of pneumonia are the most promising to deal with. Mr. Godlee lays stress upon the difficulty of dealing with a non-adherent pleura. "The right method of procedure in such a case," he writes, "though I confess it is not a very easy one, is carefully to stitch the lung up to the opening which has been made in the chest walls." With regard to the treatment of bronchiectases, Mr. Godlee writes: "Our main objects in attempting to open a bronchiectatic cavity are, (1) That the secretion



from it may be prevented from continuing the mischief in its passage over the bronchi, or as it is drawn down into other parts of the lungs; (2) that the cough may be diminished, it being held that the expiratory efforts have something to do with the production of dilatation; and (3) because it is well known that, though patients with this disorder may go on for a number of years without succumbing to it, a very large number become comparatively soon affected with some form or other of blood poisoning. With these objects in view I should feel disposed to recommend an operation if the physician were to express a strong opinion that the cavity was a single one, or at least that the mischief was principally caused by one main cavity, and also in those cases where it has arisen from the irritating presence of a foreign body in one of the bronchi. In the latter case it would be done in the hope of removing the foreign body; in the former, in the fear that, notwithstanding the diagnosis of a single cavity, there would be found others in the same lung, and not improbably in the other lung, which it may be was supposed to be sound."

**Dr. Goodhart** (*Brit. Med. Journ.*, vol. i. p. 1203, 1887) thus sums up his opinions as to the surgical treatment of empyema. He considers that the removal of ribs is quite unnecessary in the great majority of instances, and is of opinion that this operation is performed with too great frequency. "I never," he writes, "have a rib excised unless the case is an old-standing one, or there is no room to put in a large drainage tube; and as a part of the outcome of my experience, I interfere with the pleura as little as possible and for as short a time as possible. Therefore I never wash out the chest, and I attempt to do away with the drainage tube at the earliest possible period. A free incision is made into the chest wherever is most convenient, pus having been previously proved to exist at the selected spot by the exploring syringe. A large-sized tube is put into the opening, perhaps five or six inches long. This is shortened within a few days, and if all goes well after a week or ten days, the length may have been reduced to an inch or so, just enough in fact to go between the ribs and no more. The external opening should be kept open long enough to ensure that there is no re-collection going on inside. The last case I have had has been treated by a silver tube, an inch long, a flattened oval with a bore of four millimetres by twelve. It has a thin metal shield, which can be moulded to the side of the chest. It keeps the ribs apart and gives a free vent."

**Dr. Immermann** (*Deutsche med. Wochens.*, March 3, 1887). Abstract from the *Med. Chron.*, p. 416, 1887. By Dr. Stewart. The author adopts the following method of draining the chest:

An air-tight indiarubber tube filled with aseptic fluid and clamped at the end is introduced into the chest cavity by slipping it quickly through the lumen of a trochar, previously introduced and fitted with a stop-cock, momentarily opened to let the india-rubber tube pass in. The trochar is then drawn out of the chest, leaving the tube in. A clamp is placed on the tube pretty close to the chest wall. The clamp at the lower end of the tube is then removed and the trochar slipped off the end of the tube altogether. The tube is fixed by a bandage, and then the clamp, still left near the chest wall, is removed. The fluid in the pleural cavity flows gently out through the siphon, and the lung rises up and fills the vacuum as it forms. The fluid flows into a receptacle set on the floor, a bottle partly filled with disinfecting fluid, and with its cork perforated with a glass tube. As the discharge diminishes, a small flask takes the place of the bottle, and the patient may walk about with this little flask in his pocket. The tube may be used as an irrigator as well as an aspirator in cases where the discharge is offensive. The results are excellent.

### **32. Treatment of hæmorrhoids by dilatation.**

M. Verneuil (*Gaz. des Hopitaux*, No. 30, 1887) has for the last fifteen years treated all cases of piles by one method only, viz. by forcible dilatation of the sphincter. He states that throughout this long period of time he has not met with one case of failure as a result of this measure. In the great majority of cases, eight days suffice for a cure. For four days the patient should remain in bed, and for the next four days he may be merely confined to his room. The author deals with three series of cases that form exceptions to this rule:

1. The piles may become prolapsed after the operation, and may not be able to be replaced. They inflame under these conditions and gradually waste. The treatment in such cases will last for from two to three weeks.

2. The reaction of operation may be slight, and the piles may come down on defæcation or while walking. In these cases cold douches are required, and the treatment may extend over five or six weeks.

3. A failure to cure may result from paralysis of the external sphincter, which allows a prolapse of the rectum to form. The condition is to be treated by electricity, and must of necessity be extended.

### **33. The treatment of piles by excision.**

Mr. Whitehead (*Brit. Med. Journ.*, vol. i. p. 449, 1887) gives an account of no less than 300 consecutive cases treated by means of the operation that now goes by his name. Mr. Whitehead

maintains that the treatment of piles by ligature is very unsatisfactory, and that a relapse is quite common. The treatment by the clamp and cautery he regards as still more unsatisfactory, and believes that its immediate risks are greater, and its failures by recurrence more numerous. The present operation has been performed by Mr. Whitehead upon over 300 patients without a death, without a single instance of secondary hæmorrhage, or one case where any complication such as ulceration, abscess, stricture, or incontinence of fæces, has occurred.

The following are the details of the operation: The patient is anæsthetised and placed in the lithotomy position. The sphincters are well paralysed by stretching. By the use of scissors and dissecting forceps the mucous membrane is divided at its junction with the skin round the entire circumference of the bowel, every irregularity of the skin being carefully followed. The external and the commencement of the internal sphincters are then exposed by a rapid dissection, and the mucous membrane and attached hæmorrhoids thus separated from the submucous bed on which they rested are pulled bodily down, any undivided points of resistance being snipped across and the piles brought below the margin of the skin. The mucous membrane above the piles is now divided transversely in successive stages, and the free margin of the severed membrane alone is attached, as soon as divided, to the free edge of skin below, by sutures. Bleeding vessels are secured by twisting. A complete ring of pile-bearing mucous membrane is thus removed. No skilled assistance is required. The wound is dressed with iodoform. The sutures are of carbolised silk, and are not removed. Castor-oil is given on the morning of the fourth day. The patient can resume work within a fortnight. The amount of pain after the operation is trifling, and retention of urine is uncommon.

There is no doubt but that this is an admirable operation. It is founded upon a principle that has beneficially influenced the treatment of varicose veins in other parts. I think, however, that Mr. Whitehead a little overrates the risks and uncertainties of the old operation by ligature. That operation is certainly uncouth and cumbrous, but in the hands of many it has been attended with an almost uniformly good result. It is still admirably adapted for the treatment of a solitary prominent pile; and I doubt if it would be well to undertake Mr. Whitehead's extensive procedure in so simple a case. The cases in which the ligature answers least well are cases where the whole margin of the anus is occupied by hæmorrhoids, and where the free use of the ligature involves a somewhat wholesale destruction of mucous



membrane. For such a case the present ingenious and carefully planned operation is very well suited, and there is little doubt but that in such instances it will take the place of the older methods.

### **34. The treatment of cancerous stricture of the gullet.**

Mr. Symonds (*Brit. Med. Journ.*, vol. i. p. 873, 1887) advises the use of permanent tubes, which are passed through the stricture and retained. A short tube, about six inches in length, is passed through the stricture till the funnel rests upon its upper face. It is passed on the end of a conical bougie. The patient swallows down to the funnel, through which the fluids pass to the stomach. The best form of tube is that made on a silk web, and it is essential that the thickness of the wall does not increase in proportion with the increase in size of the lumen, but remains nearly the same for all sizes. This gives a wider channel, and secures softness and pliability, the funnel moulding itself to the shape of the œsophagus, and it is quite stout enough to produce and maintain dilatation of the stricture.

As Krishaber pointed out, dilatation of a malignant stricture can easily be effected. This is so rapid that in a week tubes two to three sizes larger can often be passed. Indeed, it is so rapid that it is always wise to remove and clean the tube once in ten days, for fear it should slip beyond the stricture. The first advantage attending this dilatation is that the tube may be removed from time to time, and the patient allowed to take solid food for short intervals. This variation in diet is a great source of comfort as well as of nourishment. It may be urged that this dilatation leads to a more rapid formation of the growth, to which it may be replied that the comfort is cheaply bought.

This short tube has a limited range of usefulness, for in most cases there comes a time when the lung is involved and the swallowing of fluids produces cough. The funnel being no higher than the stricture, and fluid passing by its side, nearly the same irritation arises as if there was no tube in it at all. That this is due to fluid passing by the side of the tube is suggested by the relief afforded on passing a larger one, and by the temporary relief which follows its withdrawal. When this period of the case is reached, we can only relieve by substituting a long tube, preferably of rubber, or by performing gastrotomy.

Mr. Symonds thus concludes :

"In reviewing the treatment of this form of stricture I would suggest the following plan :

"1. So long as solids can be swallowed, let the patency be

maintained by the passage of bougies, for neither by tubage nor through the opening formed by gastrotomy can solid food be introduced. Well-stewed tripe, rabbit, and pigs' and calves' feet, are swallowed readily.

"2. When solids can no longer be taken, a short tube should be introduced. This, when considerable dilatation has been effected, may be removed altogether from time to time, and the patient allowed to take solids. This form can be worn till the case terminates, unless pulmonary symptoms supervene, especially cough on swallowing.

"3. When the passage of fluids can no longer be borne, then they must be withdrawn altogether from the gullet. This can be accomplished in two ways: (a) by the use of Krishaber's long tube; (b) by gastrotomy.

"The duration of life after this stage has been reached will in no case be long, and it becomes a question of giving the patient the greatest amount of comfort. The experience of others as well as my own shows that long tubes may be worn till the termination of a case; and, as I believe, the ulceration will be avoided by using rubber tubes, and passing them by the nose. To this method I give my adhesion, rather than to gastrotomy. Those who have seen many cases know the difficulty that often arises from escape of the gastric juice, and that not a few have been fed into the peritoneum, while the operation, if done when the patient is in a depressed condition, is very likely to be unsuccessful, either from want of union or exhaustion. Other means are sufficient in the earlier stages."

### **35. Gunshot injury of joints.**

Dr. Schuchardt (*Deutsche Zeit. f. Chirurg.*, Bd. xxiv. p. 414) points out that the introduction of modern antiseptic measures has greatly modified the prognosis and the treatment of gunshot wounds of the joints. In the majority of cases a conservative expectant treatment may be carried out. The joint is thoroughly cleansed with an antiseptic solution, all fragments of bone, foreign bodies, etc., are carefully removed, the damaged parts are cut away, and the articulation drained. Resection, that was at one time so extensively employed for these injuries, should now only be undertaken when both bones of the joint are extensively injured.

### **36. Fatty hernia.**

Prof. Lucke (*Centralbl. f. Chirurg.*, No. 4, 1887) draws attention to the frequency of these so-called fatty herniæ. They consist of fatty protrusions through the abdominal parietes, and are very commonly met with in the median line in the epigastric

region. They are small, round, soft, sometimes apparently reducible, often painful and tender, and not infrequently associated with severe gastralgia. He advises that these masses should always be removed. The mass is exposed, is drawn out, and the base of the protrusion ligatured.

### **37. Gastrotomy for large foreign body.**

Dr. Bernays (*Med. News*, Jan., 1887). A man, aged thirty-eight, while giving an exhibition of so-called "sword swallowing," did actually swallow a table-knife about nine inches and a half in length. He immediately experienced great pain, and was seized with violent vomiting. Dr. Bernays performed gastrotomy within an hour of the accident. The incision, five inches in length, was made midway between the ensiform cartilage and the umbilicus. The knife was readily removed and the stomach wound closed. The patient made a good recovery, and left the hospital on the fourteenth day.

### **38. Laparotomy for the treatment of intraperitoneal injury.**

Sir William MacCormac (London, 1887), in his oration delivered before the Medical Society of London, dealt in considerable detail with this subject. The following are a few of the more conspicuous points bearing upon treatment. In penetrating wounds with visceral injury, probing is not to be forbidden. If reasonable precautions are taken, it may prove of great value in establishing a diagnosis. An early laparotomy should be performed, and the wound in the bowel closed by sutures. The establishment of an artificial anus should be avoided whenever possible.

Three conditions are required to ensure successful suture of the intestine: 1. Two adequately broad and sufficiently wide surfaces of peritoneum must be brought into contact. 2. The mucous membrane must be excluded, for when the needle passes through the whole thickness of the gut, peritonitis generally ensues from leakage taking place along the line of the thread. 3. Rapidity of execution is of extreme importance, and that form of suture is the best which can be effectively applied in the shortest time. Sir Wm. MacCormac considers Lembert's suture to be the best to be employed in all wounds of the bowel.

The cleansing of the abdominal cavity after operation is best effected by irrigation with a 3 per cent. solution of boric acid and a temperature of 100°. If no peritonitis exists a drainage tube may be dispensed with.

The following table serves to show the prognosis of these operations :



*Laparotomy for intraperitoneal injury.*

1. Stab wounds penetrating the abdominal cavity, 18 cases = 10 successful, 8 deaths.
2. Gunshot wounds penetrating the abdominal cavity, 32 cases = 7 successful, 24 deaths, 1 doubtful.
3. Rupture of the urinary bladder, 16 cases = 6 successful, 10 deaths.
4. Rupture and contusion of viscus without external injury, 13 cases = 0 successful, 13 deaths.

**Dr. Morton** (*Medical News*, Feb. 19, 1887) has published an elaborate article on Abdominal Section for Traumatism. He suggests operation for such conditions as rupture of the stomach, gall bladder, spleen, or kidney, ruptured blood vessels, etc. He advises early interference, a median incision, and a very full exploration of the abdomen. He recommends Lembert's suture as the one best suited for the intestine, and advocates drainage only when the peritoneal cavity is not successfully cleared. The statistical matter contained in the paper has been embodied, with additions, in Sir Wm. MacCormac's article.

**Dr. Augagneur** (*Province Méd.*, No. 4, 1887) takes a very different view of the treatment of penetrating wounds of the abdomen from the above writers. He is, in general terms, opposed to operation. He thinks that it not infrequently prevents a prospect of spontaneous cure and hastens death. He points out that perforations may be closed by adhesive peritonitis, that hæmorrhage may cease without interference, and that foreign bodies in the abdomen may become encapsuled and inert. M. Augagneur's views will be shared by few. They are, however, the natural protest against reckless operation, and operation under all conditions. M. Augagneur does not appear to recognise the extreme fatality of perforative peritonitis with fæcal extravasation.

**39. Laparotomy for wound of the intestine.**

A great number of examples of this mode of treatment have been reported during the past year. The general results have been most satisfactory. The following are a few of the cases. A complete series will be found in Sir William MacCormac's little volume.

**M. de Faie** (*Arch. men. de Med. et de Chir. prat.*, No. 7, 1887). As a result of an explosion a miner received a very severe wound in the abdomen. Laparotomy was performed one hour after the accident. A rent in the bowel was discovered, with escape of fæces. This rent was closed by fifteen points of Lembert's suture.

The peritoneum having been carefully washed out, the abdominal wound was closed. The patient made a good recovery.

**Dr. Kollock** (*Med. News*, April 30, 1887). A lad, aged fifteen, was shot in the abdomen with a pistol. The bullet went right through the body. Laparotomy was performed six hours after. Three wounds of the bowel were found, viz. two of the colon, and one of the small intestine. These wounds were closed by Lembert's suture. The peritoneum was washed out, and the abdominal wound closed. A perfect recovery followed.

**M. Pozzi** (*Bull. et Mem. de la Soc. de Chir. de Paris*, tome xii. p. 917). A boy, aged fifteen, was accidentally shot in the abdomen with a revolver. The wound was near Poupart's ligament. Laparotomy in the median line was performed eight hours after the accident. Several wounds of the bowel were discovered. These were closed by Lembert's suture. A wound was found in the posterior wall of the bladder, and was closed in the same way. The peritoneum contained much bloody urine. It was carefully cleaned. The parietal wound was closed and a drain introduced. The operation lasted two hours and a quarter. The patient died in twenty-two hours. There was no peritonitis and no perforation. All the sutures had held well. The case was of a very severe and complicated character.

**M. Le Dentu** (*Gaz. med. de Paris*, No. 23, 1887) gives an account of six perforating wounds of the abdomen, four due to gunshot, and two to stabs. The two latter were submitted to operation. All the six patients died. The cases demonstrate the importance of operation, and more especially of early operation.

#### **40. Laparotomy for wound of the stomach.**

**Dr. Benissowitsch** (*Chirurgitscheski Westnik*, Feb., 1887). A man, aged eighteen, was admitted with a stab of the abdomen, with protrusion of the omentum. The wound was near the ribs of the left side. The wound was at once enlarged, the damaged omentum was removed. A drain was introduced into the peritoneal cavity, and the parietal wound was closed. So considerable a quantity of blood escaped from the drainage tube during the night that on the following day the abdomen was again opened for the purpose of searching for the bleeding point. A considerable quantity of blood was found in the peritoneal cavity. On the anterior wall of the stomach, near the greater curvature, was a wound 4 c.m. long. It had implicated a branch of the gastro-epiploic artery. The vessel was still bleeding. It was ligatured. The wound in the stomach had not perforated. It was closed by sutures, and the abdominal wound was again adjusted by sutures. The patient had an attack

of pneumonia during the period of convalescence. He also, during a fit of coughing, managed to burst open the wound and to cause some intestine to protrude. He ultimately made an excellent recovery.

**Dr. Keen** (*Med. News*, May 14, 1887). A woman, aged eighteen, shot herself in the abdomen. She was seen eight hours after the infliction of the wound. Laparotomy was performed. Wounds were found in the stomach and in the small intestine. These were closed by Lembert's suture. Branches of the superior mesenteric artery and vein had been divided, and were secured by ligature. One kidney was found torn by the shot. It was removed through the abdominal wound. The patient lived until the fifteenth day, and then died of peritonitis.

#### **41. Laparotomy for gastric ulcer.**

**Dr. Basil** (*Med. Chron.*, p. 130, 1887) reports this case. A woman, aged twenty-three, the subject of gastric ulcer, developed symptoms of peritonitis. This was subsequently proved to be due to perforation. Three days after the onset of the symptoms, laparotomy was performed. The peritoneum was in a state of acute inflammation. The cavity was carefully washed out and drained. The ulcer was not observed. The patient was for a time much relieved, but ultimately died six days after the operation. The autopsy revealed the perforating ulcer.

The symptoms in this case were less violent than usual, and there is no doubt but that the patient was relieved, and probably had her life prolonged by the operation. The discovery of the ulcer during the operation would have been a matter of considerable difficulty; and had it been discovered, the closure of it would have occupied so long a time that it is questionable whether the patient would have survived the process. The operation, as it was, dealt satisfactorily with the existing peritonitis, and gave the patient a prospect of cure through the formation of adhesions over and about the ulcerated aperture. The present case by no means discourages a repetition of this measure in gastric ulcer.

#### **42. Laparotomy for typhoid ulcer.**

**Dr. Lucke** (*Deutsche Zeit. f. Chirurgie*, Bd. xxv. p. 1). The patient was a woman, aged twenty-one. Laparotomy was performed about twelve hours after the symptoms of perforation from a typhoid ulcer had appeared. The perforated bowel was exposed, and a wedge-shaped piece having been removed, the two ends were united by suture. The peritoneum was cleared of the fæculent matter it contained. A drain was inserted in the abdominal wound. The patient died a few hours after the operation.

The author suggests that in a future case the damaged bowel



should be brought out through a laparotomy wound, and an artificial anus established. The peritoneum should be well cleaned and carefully drained. When the patient's health permitted it, the artificial anus could be closed for a subsequent operation.

#### **43. Laparotomy in intestinal obstruction.**

**Dr. Madelung** (*Beilage zum Centralbl. f. Chirurgie*, No. 25, 1887). The following are the chief points in this communication. Laparotomy should only be performed when the external surroundings are favourable, and when every appliance is at hand. To avoid the inspiration of vomited matter into the larynx during anæsthesia, the stomach should be washed out before the operation. In many cases of acute intestinal obstruction the first and most urgent feature is the evacuation of the over-distended bowel. This should be accomplished by incising a distended loop. If the cause of the obstruction can be entirely relieved, then this incision, which is for the time secured by clamping, can be closed by a line of sutures. If, however, the obstruction cannot be relieved, then the incision may be made use of to establish an artificial anus.

In making this suggestion, which has been already several times anticipated by English surgeons, the author is a little regardless of the spot in the bowel at which the evacuating incision is made. Without some restriction it would be possible to establish an artificial anus in the jejunum in a case of stricture or kinking of the upper end of the rectum.

**Rydygier** (*ibid.*, p. 59) endorses Madelung's advice that the intestine should be evacuated by incision when greatly distended. Rydygier is greatly in favour of early operation, and of operation under a very wide series of conditions. He believes that the washing out of the stomach, that has been so vigorously advocated by many as a treatment for intestinal obstruction, is useless when a genuine obstruction exists.

#### **44. Laparotomy in tubercular peritonitis.**

**Dr. Kummell** (*Beilage zum Centralbl. f. Chirurgie*, No. 25, 1887). In a great many cases the abdomen has been opened in tubercular peritonitis under the influence of a mistaken diagnosis. So far back as 1862 Sir Spencer Wells performed laparotomy for what he believed to be an ovarian cyst. The cyst proved to be due to encysted peritonitis. The peritoneum was studded with tubercles. The wound was closed. The patient did well, and is said to be still alive. Many cases of like character have been recorded. In other instances, laparotomy has been performed as an exploratory operation, tubercular peritonitis has been discovered, the abdomen has been closed, and the patient has done well. Kummell adds two cases of his own. One is here given.

A woman, aged seventeen, had suffered for some six months with abdominal pain, diarrhoea, weakness, and malaise. The abdomen became slowly enlarged. It was supposed to be a case of ovarian cyst or of spreading papilloma with ascites. Laparotomy displayed encapsuled ascites with tubercular peritonitis, and much enlargement of the mesenteric glands. The peritoneum was washed out with corrosive sublimate solution, and the abdomen was closed. No relapse took place. The patient did well, and has since married.

The second case was not so favourable. The man recovered from the operation, but died five months after of general tuberculosis. Kümmell has collected thirty cases of laparotomy in tubercular peritonitis, the operation in the majority of cases being unintentional. Of these, two died of the effects of the operation, three cases died at intervals of one year, eight months, and five months respectively, of general tuberculosis. In the remaining cases recovery followed, and, so far as the abdomen is concerned, there was no relapse.

It is evident that the mere opening of the abdomen sufficed. In some of the cases that did best the peritoneum was not sponged out, and the wound was not drained. In certain instances, microscopic examination revealed the true tubercular character of the process. All the patients, except two, were women.

In the discussion that followed the reading of this paper at the German Surgical Congress, **Esmarch**, **Mickulicz**, and **Wagner**, all reported cases in which they had performed laparotomy in tubercular peritonitis, in each instance through mistaken diagnosis. Of the six cases alluded to, one died, the remaining five did very well.

#### **45. Resection of intestine.**

**Dr. Mayde** (*Allgem. Wiener med. Zeitung*, No. 17, 1887) reports a case of resection of the ileo-cæcal segment of the bowel for simple cicatricial stricture. After the removal of the diseased part, the ends of the bowel were united by suture, and the abdominal wound closed. A good recovery followed.

**Dr. Angerer** (*Münch. med. Wochens.*, No. 2, 1887). In a case of artificial anus in the upper part of the small intestine resulting from a wound received some time previously, Dr. Angerer resected the whole of the involved part. Six sutures were applied to the mucous membrane and thirty to the serous surface. To promote the union of the part, a triangular piece of the mesentery had to be removed. The operation occupied two hours. The patient recovered well.

# ORTHOPÆDIC SURGERY.

BY W. J. WALSHAM, F.R.C.S. Eng.,

*Assistant-Surgeon to, and Surgeon in Charge of the Orthopædic Department at,  
St. Bartholomew's Hospital.*

---

ALTHOUGH the papers published in this department of surgery have during the past year been numerous, there is little that can be regarded as a distinct advance in the principles underlying the treatment of the deformities usually classed as orthopædic. Certain improvements as regards the detail of management, however, (and attention to detail in orthopædic surgery does more towards ensuring success in this, perhaps, than in almost any other branch of surgery), have been introduced, and the interesting papers in which they are described will well repay perusal. The following are among the number that have been selected for a brief notice and review.

## **1. The treatment of club-foot.**

Churchill (*Brit. Med. Journ.*, p. 1025, Nov. 27, 1886) recommends for cases of congenital club-foot in young children with pliable ligaments the following method of treatment: After dividing the faulty tendons, he manipulates the astragalus and other misplaced bones, so as to stretch the ligaments and replace the foot in its normal position. A roller of Welsh flannel is applied to the foot and leg, and round the foot a circlet of webbing to protect the sole and to give additional leverage power to the extension apparatus which is fastened to the webbing. This consists of a strip of perforated tin bent at a right angle, the smaller arm being placed across the sole of the foot level with the metatarso-phalangeal joints, and the long or vertical arm carried up the leg on a level with the fibula. Two assistants fix the pelvis and thigh of the child, and draw upon a string attached to the upper end of the vertical arm of the tin. A plaster-of-Paris bandage is then applied from the toes upwards, each turn being made so as to raise and evert the foot, and secure a purchase over the outer side of the perforated tin.



## **2. On the treatment of acquired talipes equinus by a new apparatus.**

Monnier (*Gazette des Hôpitaux*, No. 1, Jan., 1887). The apparatus consists of a leg girdle for securing a fixed point for making elastic traction on the foot; of a foot piece; and of elastic cords stretching between the leg and foot piece. The leg girdle consists of two lateral shafts, at each end of which are attached two circlets for the purpose of fixing the shafts to the leg. To the centre of each shaft is fastened a semicircular steel band, which passes across the front of the leg and articulates with its fellow by a butterfly screw in the centre. This same screw bears a hook to which the elastic cords running from the foot piece are attached.

## **3. The use of traction in the treatment of club-foot.**

Shaffer (*New York Med. Journ.*, xlv. 287, 292, 1887). The instrument devised by the author combines two movements: one to bring the heel down, the other to push the toes up and make traction on them. He also describes a lateral traction shoe intended to overcome the lateral deformity of equino-varus by a pushing force. These instruments, however, can hardly be understood without reference to his diagrams.

## **4. The treatment of club-foot by Phelps's open incision.**

Dr. Philippon, in a long and interesting article in the *Deutsche Zeits. f. Chirurg.* xxv. 287, for 1886-7 advocates the open incision for the division of the soft parts down to the bone, as practised by Dr. Phelps, mention of which has already been made in the "Year-Book" for 1886. He carefully describes the method of performing the operation, considering that Dr. Phelps has not sufficiently done so. With the foot in the extended position, and after having subcutaneously tenotomised the tendo Achillis, he makes a vertical incision of from three to four centimetres long, from a point midway in an imaginary line drawn from the front border of the inner malleolus to the tubercle of the scaphoid, dividing, in severe cases, the tibialis posticus, flexor longus digitorum, abductor pollicis, flexor longus pollicis, and the internal lateral ligament. In less severe cases it suffices merely to divide the tibialis posticus, and the internal lateral ligament, under which circumstances the incision need not be more than two centimetres long. If, however, it is found necessary, or is intended from the first, on account of the severity of the deformity, to divide the whole of the soft structures before mentioned, the incision should be prolonged to three, or, better, four centimetres, and if the parts still do not yield, the plantar fascia and flexor brevis digitorum may

also be divided by passing a knife beneath them from the wound and cutting outwards towards the skin. The tibialis posticus will be found close to the malleolus on opening its sheath, and below it the flexor longus digitorum. If the edges of the wound are now retracted, the abductor pollicis will bulge into the wound. This muscle is next carefully divided, and beneath it will be found the internal plantar nerve and artery. On drawing these aside the flexor longus pollicis is met with lying deeply in the foot. The internal lateral ligament is divided by a curved incision below the internal malleolus.

### **5. Treatment of club-foot by resection of the tarsal bones.**

Dr. Krauss (*Congress of the German Surgical Society*) objects to osteotomies on the tarsus, as he considers this treatment impairs more or less the form of the foot, the stability of the osseous arch, and the usefulness of the extremity, and is not free from risk; whereas tenotomy is quite safe, and after its successful employment the foot is much improved, and deviates very little from the normal form. If resection is performed, Dr. Krauss prefers extirpation of the astragalus, to removing a wedge-shaped piece from the medio-tarsal joint; but even this operation he objects to, inasmuch that he believes an immovable, or insufficiently movable ankle, a weak union between the os calcis and the second row of tarsal bones, and serious shortening of the foot, result. Resection of a portion of the tarsus, he says, spoils the skeleton of the foot to such an extent that all chance of a future restoration of the natural form of the extremity, and of its natural functions, by means of orthopædic apparatus, is removed. He affirms that there is no conceivable form of club-foot in which tarsal resection is justifiable, except it be a case of one that is persistently painful in an old subject, and in which there is no prospect of a good result by orthopædic treatment. In such a case resection, he thinks, might fairly be tried in place of amputation.

Except for severe and intractable cases, osteotomy, no doubt, ought not to be undertaken, and this opinion has been expressed in this Report on more than one occasion; but to say that it is only justifiable as an alternative to amputation is certainly contrary to the experience of English surgeons. Osteotomy, when carefully performed, does not impair the form of the foot, nor the vitality of its osseous arch, and the usefulness of the extremity, and when done with antiseptic precautions is, although not as safe as tenotomy, not a more dangerous proceeding than many others which are daily employed for the cure or alleviation

of much less serious affections. That extirpation of the astragalus is a more suitable operation for restoring the form of the foot than removing a wedge-shaped piece from the medio-tarsal joint is too sweeping an assertion, and not borne out by experience. In some varieties of the deformity, extirpation of the astragalus, and in other varieties excision of a wedge-shaped piece, is the better operation ; whilst for other cases, again, the removal of a portion of the head of the astragalus of a pyramidal shape or a linear osteotomy will suffice. Nor does extirpation of the astragalus necessarily leave an immovable ankle and a weak union between the os calcis and second row of tarsal bones. I have seen, not in one case only, a most useful foot, with exceedingly good movement at the ankle joint, and without the weakness spoken of, result from this method of treatment, which I need hardly say, however, was not resorted to till other and more gentle means had been skilfully tried and failed. In these cases there was not the serious shortening of the foot said to occur by Dr. Krauss. With regard to the removal of a wedge-shaped piece of bone from the tarsus, instead of the skeleton of the foot being spoiled to such an extent that all chance of future restoration of the natural form of the extremity and of its natural function by means of suitable orthopædic treatment being removed, most excellent results have been obtained, and the necessity, in many instances, for orthopædic appliances thereby dispensed with. In suitable cases I hold that tarsotomy is a most useful operation, and I regard it as one of the distinct advances of orthopædic surgery in recent years.

#### **6. The operative treatment of paralytic varus.**

Rydygier (*Berliner klinische Wochenschrift*, Oct. 4th, 1886, p. 687). In cases of paralytic club-foot, in which the circumstances of the patients are such that they cannot afford an expensive orthopædic apparatus, or for which it is not applicable, Dr. Rydygier recommends that rectification of the foot should be obtained by producing ankylosis of the ankle joint. He makes a longitudinal incision along the fibula, opens the joint, removes the cartilage from the external malleolus and articular surface of the tibia, and then incises a wedge-shaped portion of bone, with its base directed outwards from the upper surface of the astragalus. The foot is then rectified, and the wound drained and dressed antiseptically. Subsequently, he recommends the use of a boot with rigid side-irons.

#### **7. The treatment of flat-foot.**

Barling (*Birmingham Med. Review*, vol. xxi. p. 19, Jan., 1887). For the *simple* form he recommends a valgus pad and



Walsham's boot ; for the *rigid*, wrenching and plaster of Paris, a method several times referred to in the "Year-Book" of former years. Division of the peronei he very properly condemns as unnecessary, although he has in exceptional cases resorted to it, then; however, confining himself to division of the peroneus brevis. In the cases with bony deformity, he thinks wrenching is useless, as in such the enlargement of the scaphoid on its dorsal surface overlaps the neck of the astragalus, and the tubercle of the scaphoid is enlarged and projects downwards and backwards. On attempting to flex the transverse tarsal joint, this enlarged process either locks against the astragalus and prevents flexion, or is thrust into the astragalo-scaphoid joint like a wedge, and the joint gapes widely. For these cases he recommends Ogston's operation on Chopart's joint. (*See* page 151 "Year-Book," 1884.) Six months after the operation his patients were still doing well.

In advanced cases such as Dr. Barling describes, Ogston's operation, or in some, Stokes' method of excising a wedge of bone from the neck of the astragalus, is no doubt at times necessary, but cases which at first sight appear very unpromising, and yield little on wrenching, will often be found, on repeating the wrenching two or three times, to gradually improve, notwithstanding the apparent presence of bony deformity, which is certainly deceptive, and may be simulated by the peculiar displacement of the bones.

### 8. The treatment of psoas abscess.

Owen (*Brit. Med. Journ.*, p. 869, April 23, 1887). In an article on psoas abscess, when and where to open it, Mr. Edmund Owen, holding the view that a psoas abscess must, with very few exceptions, ultimately make its way to the surface and break spontaneously, advocates the early opening, *i.e.* as soon as the treatment has brought the patient into the best possible condition for the ordeal. He recommends that the opening should be made in front, just above Poupart's ligament at its outer end. A stiff probe is next passed, and a counter-opening made in the loin. The cavity is then thoroughly washed out with iodine solution decolorised with carbolic acid, and a drain tube inserted. The wound is dressed with antiseptics. On the day after the operation the cavity is again washed out and drained and dressed as before. If there is an abscess on both sides, both abscesses should be opened at the same sitting and drained, as they are apt to communicate, and if such be the case the discharges cannot be kept aseptic through an opening on one side only. When the abscess is small it is best opened from behind, just above the crest of the ilium and external to the erector spinæ. From the first day Mr. Owen has found the discharge become

thin and watery, suppuration in the ordinary sense being at an end.

He condemns aspiration, as by its means, he maintains, the contents of the abscess are liable to become septic, and the whole of the contents cannot be in this way removed.

Although in the main the Reporter can speak well of Mr. Owen's treatment, he does not agree with his remarks on aspiration. If care is taken septic changes can be avoided, and if the aspiration is performed frequently, although the whole of the contents may not be evacuated, sufficient are removed to allow the walls and tissues around the abscess to contract and so reduce the size of its cavity that should an opening ultimately become necessary a much smaller wound has to be dealt with. There is, further, a chance, though possibly a remote one, of the abscess ultimately drying up and becoming cured. Early operation with a counter opening in the loin is strongly recommended by Dr. Dollinger. (*See page 154 "Year-Book," 1886.*) He, however, also recommends that the pyogenic membrane should be destroyed by thoroughly swabbing out the cavity with chloride of zinc.

#### **9. The treatment of congenital dislocation of the hip.**

Barwell (*Brit. Med. Journ.*, p. 1150, May 28, 1887); Adams (*Brit. Med. Journ.*, p. 867, April 23, 1887). Mr. Barwell recommends for certain cases of this deformity tenotomy, continuous pressure, and extension. Mr. Adams, on the other hand, maintains that tenotomy is of no avail, and recommends continuous extension by the method mentioned in the "Year-Book" of last year. The cases in which Mr. Barwell thinks the treatment advocated by him is applicable are those in which on making extension on the limb a peculiar jog or impulse can be felt. This sensation, he thinks, is indicative of the existence of a slight ridge, and hence of the presence of an imperfect acetabulum. Continuous pressure in these cases, after what remains of the head of the bone has been brought into apposition with this imperfect acetabulum through extension and tenotomy of any resisting tendons is, he affirms, attended with excellent results, and does away with the necessity of the long-continued extension recommended by Mr. Adams, Dr. Buckmaster Brown, and others. The pressure, he holds, leads to the absorption of the tissue filling up the imperfect acetabulum, and causes a kind of imperfect socket for what remains of the head of the femur. In the cases under his care he tenotomised the adductor longus and brevis, and the greater part of the adductor magnus and gracilis, at their origin from the pelvis; the rectus, and in one instance the gluteus

medius, were also divided. The pressure was applied by means of a firm belt constructed so as to embrace tightly the pelvis, including the upper end of the femur, an under strap being provided to prevent riding upwards. The extension, which was employed for six weeks, was applied in the ordinary way by weight and pulley. Four years after the commencement of treatment, the patient could walk without support or without limp or swaying of the body, and with her clothes on there was nothing unusual to be noted in her gait or mode of standing, although when undressed the projection of the nates was still more marked than normal.

### 10. The treatment of bent tibiæ.

J. M. Roberts (*Therapeut. Gaz.*, Detroit, 3rd S., p. 221, 1887). "Cuneiform osteotomy for anterior curvature of the tibia." Dr. Roberts has invented an instrument for determining the exact degree of aberration of the deformed bone. Having found this, he next, by means of a contrivance he calls a sphenometer, ascertains the exact size of the wedge of bone it is necessary to remove in order to bring the tibia into a straight line. These preliminaries being settled, he makes a longitudinal incision over the most prominent part of the bent tibia, retracts the skin and the soft tissues, and passes retractors, of which he has invented several of various shapes, between the soft parts and the bone, so as to completely isolate the latter and protect the soft tissues from the saw. The wedge of bone is removed by a circular saw worked by electricity, which he calls an electro-osteotome. The bone is then drilled and sutured with kangaroo-tail tendon, whilst the wound is dressed with hydro-naphthol, a new antiseptic introduced by Dr. George R. Fowler. The limb is finally placed in guttapercha splints, and unless any rise of temperature, or other untoward symptom occurs, is not disturbed till the wound has healed.

In very severe cases it is no doubt at times necessary to remove a wedge of bone, in order to restore the tibia to the straight condition. As a rule, however, in slighter cases, and even in some in which at first sight it would appear that removal of a wedge is necessary, it will be found that a subcutaneous division of the bone with the chisel will suffice. If the division of the bone is made obliquely from above downwards, the lower fragment can be slid on the upper, and an excellent result in this way obtained. As regards the seriousness of the operation there cannot, I think, be any comparison between the simple subcutaneous division with the chisel and the considerable bruising and laceration of the soft part which must necessarily occur, however carefully the operation



is performed, in removing a wedge-shaped piece, especially if the bone is completely isolated by the passage of retractors in the way recommended by Dr. Roberts. I have seen suppuration in spite of all antiseptic precautions ensue in the muscular planes after operation for removal of a wedge-shaped piece, and many months have elapsed before the patient has been convalescent. Dr. Roberts considers the chisel a very inferior instrument to his electro-osteotome, and believes that the concussion in its use may be attended with bad results, not only in that it may produce inflammatory or other changes in the bone, but may have an injurious effect on the nerve centres. I have employed the chisel in a very considerable number of these osteotomies, and can only say that I have experienced none of the evils dreaded by Dr. Roberts, nor am I aware that the many other English surgeons who prefer the chisel to the saw have done so either.

### **11. The treatment of hammer toe.**

Anderson, Adams, Parker (*British Medical Journal*, p. 1215, June 4th, 1887), Terrier (*Société de Chirurgie*, vol. xiii. p. 211, 1887), Judson (*New York Medical Journal*, xlv. 626, 1887). Mr. Anderson ascribes this condition to a contraction of the plantar fibres of the lateral ligaments and glenoid plate, and believes it quite unconnected with the wearing of badly fitting boots, or with any constitutional diathesis. He advises excision of the head of the first phalanx by a longitudinal incision through the integuments and extensor tendon. Mr. Adams maintains that division of the lateral ligaments subcutaneously will suffice; whilst Mr. Parker considers that the removal of the toe is generally called for. Dr. Terrier agrees with Mr. Anderson in regarding tenotomy as unreliable for remedying the defect, and advises resection of the interphalangeal joint; whilst Dr. Judson, on the other hand, affirms that such cases are readily curable, especially in children, by passing a single narrow slip of adhesive plaister over and under and between the toes, in such a manner as to reduce them to a straight line, a method which he says in children is successful in a few days.

The opinions expressed above are sufficiently diverse. The facts of the case would appear to be that these various authors are speaking of different degrees and varieties of the deformity. In very slight cases manipulation and some such simple method as that proposed by Dr. Judson, are all that is necessary; whilst for more severe cases tenotomy, or, if this is not sufficient, subcutaneous division of the ligaments may be required; whilst, yet again, for those intractable cases described by Mr. Anderson, in which there is great contraction of the lateral ligaments and

glenoid plate, nothing short of resection of the bone or amputation of the toe will suffice for remedying the deformity.

## 12. Treatment of hallux valgus.

A new splint by Krohne and Seseman (*British Med. Journ.*, p. 943, April 30th, 1887). The splint invented by Messrs. Krohne and Seseman consists of a lever spring made of metal, about half an inch wide, covered with leather, and of different lengths to meet the size of the foot. It reaches from the middle of the great toe to the posterior end of the arch of the foot. The fulcrum is kept in position by a well-padded rectangular plate jointed to the lever. The toe is secured to the distal end of the lever by a soft leather circlet; at the other end of the lever an elastic band, about an inch wide, is fixed at right angles, and is carried in a figure of eight round the foot and ankle, and attached to a button on the rectangular plate. The lever is so shaped that pressure on the great toe joint is avoided, and it can be worn in a well-fitting broad-toed boot. The apparatus is an excellent one, and appears likely to supplant other instruments for this affection that have been hitherto in use, in that it fits more accurately and takes up less room, and consequently does not necessitate the wearing of such large and ugly boots as does the use of the ordinary bunion-spring.

Fulton (*Weekly Medical Review*, St. Louis, Dec. 11th, 1886). *The treatment of hallux valgus by resection.* Dr. Fulton recommends resection of the head of the metatarsal bone, and says that in five cases he has successfully cured the deformity in this way. This operation should be reserved for extreme cases. For slight degrees of the deformity, exercises, wearing of properly shaped boots, and the instrument above described, will suffice. Before resorting to resection, subcutaneous osteotomy in all but the most severe cases should certainly have a trial.

## 13. Treatment of stiffness, pain, and deformity of the great toe; hallux flexus, hallux rigidus, and hallux dolorosus.

*Stiffness of the great toe in male adolescents.* Lucy (*British Med. Journ.*, p. 726, April 2nd, 1887), Blackburn (*ibid.*, 919, April 23rd, 1887), Howard Marsh, Cotterill (*ibid.*, pp. 1156-58, May 28th, 1887); Lang (*ibid.*, p. 1385, June 25th, 1887). *Contraction of the metatarso-phalangeal joint of the great toe.* Davies-Colley (*British Med. Journ.*, p. 728, April 2, 1887). At the Clinical Society of London, and in the *British Medical Journal*, a very interesting discussion has been carried on during the past year by the authors above mentioned. Whilst some regard the deformity as depending upon flat-foot, others believe that flat-foot has little

to do with its causation. Most consider it in some way dependent on the use of badly-shaped and ill-fitting boots. Mr. Cotterill maintains that neither flat-foot nor ill-fitting boots alone are sufficient to cause it, but attributes it to a combination of the two conditions. All agree in recommending the use of a properly-shaped boot. Mr. Lucy paints the joint with tincture of iodine and employs a boot with higher blocked toes, and larger than usual. Mr. Blackburn advises rest, and that the boots worn should be made on a last shaped to the foot. Mr. Marsh does not speak very hopefully of treatment. He has seen good, however, in some cases, from forcible movements of the toe under gas. He advises appropriate remedies for flat-foot when there is any tendency to this condition; complete rest on a splint or in plaster of Paris, when the parts are hot and tender; remedies suitable to osteo-arthritis with iodide of potassium when there are either symptoms or a family history of that disease; and excision of the joint in severe cases when milder means have failed. Mr. Cotterill, in all slight cases, has succeeded in curing the deformity by supporting the instep. In more advanced cases, where there is severe pain and swelling, he employs rest, fomentations, and gentle support with a light splint: whilst in severe cases, where firm ankylosis has occurred, he advises removal of the proximal half of the first phalanx, taking care to ensure a movable joint subsequently by appropriate after-treatment, passive movements, etc. Dr. Lang considers that the terms "hallux flexus" and "hallux rigidus," by which it has been proposed to call the affection, have the disadvantage of directing attention away from the actual condition causing this state of the great toe: viz. a giving way of some part of the plantar arch. He believes the best results are to be obtained by supporting the instep, i.e. in directing the treatment to the cure and prevention of flat-foot. Mr. Davies-Colley recommends division of the inner band of the plantar fascia and short muscles of the sole about three-quarters of an inch behind their insertion into the sesamoid bones and first phalanx. He admits, however, that relapses after this treatment may occur, and for such he recommends excision of the metatarso-phalangeal joint, or the removal of the proximal half of the first phalanx, leaving the head of the metatarsal bone, the sesamoid bones, and the attachment of the muscles intact.

Ellis (*British Med. Jour.*, p. 1157, May 28th, 1887). Mr. Ellis, believing that all the above described forms of deformity depend upon an alteration in function of the flexor longus pollicis in consequence of wearing median-pointed boots, advises that treatment should be directed to restoring fully the functions of the parts.



For this purpose he insists on a boot giving plenty of room for the great toe to come into straight line ; and when this has been provided the sock must be attended to, either a hole being cut for the great toe, which is then swathed in a bandage, or the use of a sock with a separate stall for the great toe. "The invitation to occupy the vacant space in the boot must be kept open, the leather being frequently pressed up and the space stuffed with wool when the boot is not in use, or the boot placed on a well-formed tree." Along with this he advises exercises to restore the loss of power and normal function of the long flexor. This he does by getting the patient to walk barefooted, instructing him to direct the foot forwards and not in the slightest degree everting it, at the same time that he makes firm pressure with the great toe against the ground, endeavouring the while to turn the great toe inwards towards the middle line of the body.

#### **14. Treatment of wry neck.**

R. Jones (*Brit. Med. Journ.*, p. 279, Feb. 5, 1887), "Lateral curvature of the upper dorsal and cervical vertebræ following rheumatism treated by mechanical means." This case, which was the result of rheumatism, a not uncommon cause of acquired wry neck, was of two and a half years' duration. The angle of the jaw on the right side rested on the sterno-clavicular notch, the face looking almost parallel to the left shoulder. It was impossible to obtain even a remote sensation of yielding on trying to elevate the side of the face. The treatment at first consisted in a carefully adjusted process of graduated leverage by means of wedges of paper introduced between the jaw and the sternum. By persevering and gradually enlarging the thickness of the wedge as the parts began to yield, room was at length obtained for a cervical collar. The rotatory deformity which still remained was subsequently in great part overcome by means of an ingenious iron framework, consisting of two uprights on either side of the head and a cross piece above. By means of this, oblique traction by bandages was made upon the head. The irons were held *in situ* by a plaster corset, and prevented from slipping downwards by a hook-like curve in the irons fitting over the shoulders.

#### **15. On the treatment of lateral curvature of the spine.**

On this subject the following, amongst other papers, have been published during the last year. If these papers may be taken as an index of the opinion of the profession on the vexed subject of the best treatment of lateral curvature, it would appear that a belief in "exercises" is gaining ground, and that less faith is placed in spinal supports than hitherto.

**C. F. Stillman** (*New York Med. Record*, xxx. p. 569, 1887), "Some new features in the treatment of rotatory and lateral curvature;" **Schildbach** (*Jahrb. f. Kinderheilk.*, xxv. p. 557, 1886), "On the brace treatment of scoliosis;" **Barwell** (*Lancet*, July 9 to Aug. 13, 1887), "On lateral curvature of the spine;" **Gibney** (*Philadelphia Med. Times*, xvii. p. 205, 1886-7), "Lateral curvature;" **Bradford** (*Boston Med. and Surg. Journ.*, p. 221, 1886), "On the treatment of lateral curvature."

**Dr. Stillman** in severe cases recommends "backward oblique traction." This "consists in placing the patient on a table in a sitting posture, the buttocks being at a distance from its edge, corresponding to their distance from the convexity of the dorsal deformity. The patient then gradually reclines backwards, twisting at the same time in a direction opposite to the twist of the curvature, until the spine is dragged upon by the weight of the head and upper extremities." "Another method of obtaining this backward oblique traction is to reverse the process, allowing the lower extremities to fall over the edge of the table in a position opposite to that of the deformity, this being particularly efficacious in curvatures in which the lumbar region is most involved." These postures should be practised in the less severe cases as exercises, etc.; but if the muscles have become so weakened, or such anatomical changes have taken place in the osseoligamentous structures that the normal curves cannot be restored when the erect position is assumed, a brace will be found necessary. The brace, says Dr. Stillman, should be active, not passive, and so planned as to imitate, as far as possible, the forces exerted in the above described postures. It is constructed so as to ensure a backward oblique traction and forward oblique pressure, corresponding to the backward oblique traction force exerted by the gravital force, and the forward oblique pressure occasioned by the table. The brace, which is a very ingenious contrivance, can hardly be understood without reference to Dr. Stillman's paper.

**Schildbach**, for scoliosis in young children, adopts the principle of Rauchfusz's suspension girdle. This latter, designed by Rauchfusz for the treatment of the kyphotic curves of infants, consists of (1) a broad band suspended from either side of the trellis-work of the crib, its centre raised one centimetre above the mattress; and (2) a waist-band attached to the centre of the suspension band to secure the child, when placed upon the latter, in position. The child lies in the concavity of the suspension girdle, so that the most prominent part of the curve is raised from the bed, whilst the weight of the portion of the spine unsupported by the band above and below tends to correct the

kyphotic curve. Dr. Schildbach adapts this apparatus to scoliosis by attaching the waist band a little to one or other side of the middle of the suspension band, according to whether the curvature is to the right or left. Thus in the case of a left-sided curvature the waist band is placed nearer the right edge of the bed, so that when the child is laid upon the suspension band at this spot, and the waist band is secured in front, he sinks down by his own weight towards the middle of the bed, and there lies on his left side with the convexity of the curvature supported by the strap underneath. For slight cases of scoliosis in older patients Dr. Schildbach employs the following exercises: The patient is placed in drill posture. Both arms are then slowly raised from the sides with the palms turned to the front. The right arm is carried up till it stands vertically beside the head, the left arm till it is directed laterally outwards, the shoulders being drawn down as much as possible. In this way the upper part of the body is pushed to the right, and a slight curve to the left disappears, or is transformed into a right-sided one. If the weight of the arm is not sufficient to accomplish this, a light weight is held in the left hand. If the curvature is more advanced, and there is some rigidity, he employs what he calls "unilateral deep breathing." Thus in curvatures to the left the child places the left hand, the fingers of which are directed towards the front, on the prominent side, the right arm being held perpendicularly in the air, or laid over the head. She then takes as deep a breath as possible, and presses at the same time with gradually increasing force on the left side, relaxing the pressure again during expiration. While this manœuvre is being performed Dr. Schildbach says the lateral deviation and the rotation disappears, and the somewhat sunken-in right side is brought out to its full extent. The hand must be pressed upon the most prominent part of the hump, and somewhat behind the line of the shoulder.

**Barwell.** For "lumbar curvature," in addition to the sloping seat, thick sole, loin bandage, and lateral sling, all of which are described in his book on the spine ("Curvatures of the Spine," 3rd edit., 1887), Mr. Barwell advocates the loop-girth. This consists simply of a broad piece of webbing, fastened at each end to a staple in the wall, a little above the patient's waist. She stands with the concave side towards the wall; the convex is caught in the loop, the foot of that side being supported by a block from one to two inches high. When the girth is secured, she places her clasped hands on her head and slowly bends over, rises again, and repeats the manœuvre several times. For "dorsal



curvature" he employs the following exercises: "In each of two walls facing each other a staple is fixed, from which cords, rendered elastic by the intercalation of accumulators, pass to the neighbourhood of a chair midway between the walls. On the chair is placed the wedge-shaped cushion (sloping seat), on which the patient sits, high side to left. She then crosses her right arm in front, and her left arm behind the body, grasping in each hand the cord, which must be at a tension of at least two pounds, and which is provided with a suitable handle. Thus placed, she takes long, slow, and deep breaths, gradually increasing the number." Another device is to weight the left arm with a strip of lead weighing about four ounces. It is covered with thin mackintosh, and is hung on the arm about the insertion of the deltoid. Lastly, he recommends the wearing of what he calls a "rotation bandage." This, which was devised by Mr. Barwell about two years ago, is a mere modification of his well known spinal bandage described in detail in his work above mentioned. He maintains that the elastic rings, both in the shoulder loop and in the front cross-strap of the bandage, play with every inspiration, so that each breath is a little step towards rectification of rotation. I have extensively employed Mr. Barwell's bandages in the orthopædic department at St. Bartholomew's Hospital, and although I am not prepared to say that they are of no service, I cannot agree with him that they exercise as much power over correcting the rotation of the spine as he affirms. In my experience the elastic loops either hardly act at all, or the bandage has to be applied so tightly that the patient is unable to bear the pressure and embarrassment to respiration which it causes. I have somewhat modified the bandage in having the straps made of Martin's solid rubber. This has seemed to me to exercise more elastic tension than the loops; but here again I have not been able to convince myself that the bandage has materially influenced the result of the treatment by "exercises and posture," which has invariably at the same time been adopted.

Gibney recommends exercises in early cases; later, plaster of Paris and suspension. He employs this exercise twice a day. "With one hand in the axilla grasping the left shoulder, and the other over the ribs of the projecting side, he makes movements for ten or fifteen minutes, as if attempting to untwist the rotatory spinal column," and then lets the patient hold on to the end of the table or head-board of the bed whilst traction is made on her pelvis.

#### **16. Spinal supports.**

Bruns, "A removable silicate jacket" (*Vratch*, p. 24, No. 2, 1887).

Dr. Bruns prefers a silicate to the Sayre's plaster corset. He first makes a thin plaster cast of plaster of Paris, and then moulds a silicate jacket on it, making it to open in the centre, and secures it with buckles. Its weight is  $3\frac{1}{2}$  pounds, and it takes a long time to make. The author advises it on account of its cheapness and durability.

Taylor (*St. Louis Weekly Med. Record*, Dec. 11, 1886), "A home-made spinal apparatus." This apparatus is composed of blotting-paper saturated in an alcoholic solution of shellac alternating with layers of coarse linen, the layers being stuck together with glue.

Mollière (*Lyon Médical*, p. 464, July 31, 1887), "On the treatment of Pott's disease by a parchment corset." Mollière recommends this material for the construction of corsets for Pott's disease on account of its extreme lightness, the excellent support it lends, and its very moderate cost.

Schildbach (*Jahrb. f. Kinderheilk.*, xxvi. Heft 2, p. 248), "An instrument for kyphosis." It is constructed on the principle of the well-known Taylor's support, and consists of a pelvic band from which two uprights are continued on either side of the spine, and united by a transverse piece opposite the level of the scapulæ. From either end of the upright piece two spring shoulder-bows are carried over the shoulders, and to their end is attached a leather strap which is carried through the axilla and secured by a button to the upright. Over the lower ribs and upper part of the abdomen a properly shaped linen belt is worn and secured by straps to the upright. The instrument differs from Taylor's support chiefly in that the uprights, instead of being rigid, are made of flexible steel, so as to act as springs and actively draw the upper portion of the body backwards. The linen girdle Dr. Schildbach considers is of use in correcting any corresponding lordosis in the lumbar region.

The following papers, in addition to those to which reference has been made, have also been published during the past year :

**17. On the treatment of spinal curvature.**

Landerer, "Treatment of Spinal Curvature by Massage" (Leipzig, 1887).

Gibney (*Med. Journ. West. New York*, Buffalo, vol. ii. p. 53, 1887), "The Treatment of Tubercular Spondylitis."

Colpelli (*Mitth. des Vereins des Aertyle von Steinwerk*, p. 52, 1856), "The Treatment of Scoliosis."

Cane (*Bull. de l'Acad. Royal de Méd. de Belge*, 3rd S. vol. xx. p. 1346, 1886), "Communication on the Treatment of Pott's Disease."

Verneuil (*Bull. de l'Acad. Royal de Méd. de Belge*, 3rd S. vol. xx. 1189, 1886), "Communication on the Prognosis and Treatment of Disease of the Vertebrae."

Sayre (*Med. and Surg. Reporter of Philadelphia*, p. 409, 1887), "Spondylitis and Rotatory Lateral Curvature, their proper Treatment."

**18. On the treatment of knock-knee and bow-legs.**

Roberts (*Virginia Med. Monthly*, No. 13, p. 844, 1886-7), "Electro-Osteotomy in Knock-Knee."

**19. On the treatment of rickets by osteotomy.**

Dennis (*Med. Journ. New York*, vol. xliii. p. 225, 1887), "Treatment of Rickets by Osteotomy."

**20. On the treatment of club-foot.**

Gibney (*Trans. of the Med. Soc. of New York*, Syracuse, p. 363, 1886), "Remarks on the Management of Club-Foot."

Madelung (*Centralbl. f. Chir.*, No. 44), "Contraction of the Plantar Fascia."

The following books have been published during the year :

Henry F. Baker, "Practical Notes on the Treatment of Deformities."

Parker, "On Congenital Club-Foot."



# SURGICAL DISEASES OF CHILDREN.

BY EDMUND OWEN, F.R.C.S.,

*Surgeon to the Hospital for Sick Children, Great Ormond Street, and to St. Mary's Hospital, London.*

---

## **1. Intubation of the larynx.**

In the last "Year-Book of Treatment" (p. 164) the Reviewer remarked that though he neither had, nor desired, a practical acquaintance with this method of treatment of laryngeal diphtheria, still he thought it expedient specially to direct attention to it. He then cited his reasons for considering it by no means likely to become an efficient substitute for tracheotomy in that disease. Nevertheless, the method is being somewhat extensively adopted, if not in this country, at any rate in the United States of America. And though the Reviewer at present holds the same opinion as he did last year, still he must admit that in certain cases intubation has, in the hands of certain practitioners, been fairly tried, and not found without merit.

Thus, **Drs. Shingleton Smith and Waldo**, of Bristol (*Lancet*, June 18, 1887), report three cases in which intubation was resorted to, twice with success.

CASE 1.—Two years and four months. There was marked dyspnœa; the lips were blue, and there was a harsh croupy cough. The fauces were red and swollen. By three hours after admission the dyspnœa had become so urgent that intubation (after O'Dwyer's method) was performed. This was followed by coughing, which lasted about half a minute, and then the child breathed calmly, the relief being perfect. The patient continued comfortable, the temperature ranging between 100° and 102·8°. On the third day the tube was removed. After removal, in consequence of gradually increasing dyspnœa, the tube was again inserted, about three hours after removal. This time it was ejected during a violent fit of coughing. The child improved, the temperature gradually became normal. The voice continued to be hoarse for a week after the removal of the tube. A slight

attack of broncho-pneumonia supervened, but this did not appear to be connected with the intubation.

CASE 2.—Five years. Had been ill a week with symptoms of catarrh, a cough of harsh character, and gradually increasing dyspnœa. April 24: The face had a leaden hue; there was great dyspnœa; cough of croupy character; fauces reddened, but no membrane visible. Urine concentrated, and containing albumen. Temperature  $101.2^{\circ}$ . The dyspnœa increased, although temporary relief was obtained by an emetic powder, and intubation was resorted to on the morning of the 25th. This was followed by marked relief, but not so complete as in the foregoing case. April 26th: Cough rather severe; urine still albuminous; thirty-six hours after its introduction, the tube was expelled during a severe attack of coughing. Two hours after the ejection of the tube the child coughed out a piece of false membrane. The temperature ascended to  $104^{\circ}$ , but in all other respects the patient seemed better. On May 1st an increase in the amount of albumen in the urine occurred, and the temperature rose to  $102^{\circ}$ . It continued elevated for a few days, but then the child began to convalesce.

CASE 3.—Three years. Was admitted on May 10th; no abnormal appearance about the fauces; slight dyspnœa. Temperature  $99^{\circ}$ . No albumen. 12th: Patient had attacks of dyspnœa during the night. The face is livid, and there is very little air entering the chest. The pulse is small and feeble, and the child seems exhausted. Intubation at 6.15 p.m., followed by instant relief.

13th: The child continued perfectly comfortable until 5 a.m., when the string by which the tube had been fastened to the cheek gave way, and disappeared. As the tube was not found *in situ*, and had not been ejected, it was concluded that it had been dislodged during the act of coughing, and had been swallowed. By 9 a.m. the patient had again become so dyspnœic that intubation with a larger tube was performed; this, however, was ejected in three-quarters of an hour. The breathing continued fairly easy for a few hours, and then the child again became dyspnœic. April 14th: Intubated again at 12.30 a.m. Again followed by instant relief. Rhonchus over lungs behind. April 15th: The child rapidly getting weaker, but air seems to enter the chest again freely. Death occurred at 4 p.m. At the necropsy the trachea and bronchi showed marked signs of acute inflammation. The tube which the child had swallowed was found in the cæcum.

Drs. Shingleton Smith and Waldo do not attempt to draw

conclusions from the report of these cases, but confine their remarks chiefly to the *technique* of the operation. They ascribe the acute tracheitis and bronchitis which occurred in Case 3 to the operation; for the intensity of the inflammation was greatest in the upper part of the trachea. Whether the insertion of a tube which was presumably rather large (for the child had swallowed the tube which corresponded to the size of its larynx) had an increased effect in the causation of this inflammation they could not say. The tube, which passed harmlessly through the pylorus and ileo-cæcal valve, measured two inches in length. Without entering upon the question of the relative value of tracheotomy and intubation, they record their deliberate opinion that in each of the above cases they would have been absolutely compelled to perform tracheotomy had not the process of intubation been substituted. And they conclude with the remark, that though intubation may prove of value in certain cases, yet it certainly has dangers of a somewhat more serious character than some recent writers would lead one to suppose.

On June 2nd, 1887, an important series of short papers were read on this subject before the New York Academy of Medicine, by Drs. Jacobi, O'Dwyer, Huber, and others. And Dr. Dillon Brown has published (Trow's Printing Co., 201, East Twelfth Street, New York), together with these papers, statistical records of no less than 806 cases in which intubation has been resorted to, for the most part as a substitute for tracheotomy. Of this number 221 recovered, or 27·4 per cent. That is a little better than one recovery in four. Of the total number, Dr. O'Dwyer himself had eighty-one cases of intubation, with twenty recoveries. The care with which these tables are drawn out is deserving of great praise, but when one sees the comparatively small number of recoveries, one is inclined to press on with the important question—Does intubation offer us a means of treating laryngeal diphtheria in children which is likely to take the place of tracheotomy?

It is important also to note that these 806 cases were in the hands of but sixty-five operators, giving an average of over twelve to each; so that there is every reason for believing that the result of the operation did not suffer from want of knowledge and skill on the part of the operators.

From these reports it appears that the tube is not infrequently coughed up, to escape by the mouth or to wander down the œsophagus, and eventually to be passed *per anum*; that it may be choked by mucus, or blocked by false membrane which it has "crowded down" on being introduced; that it may slip into the



trachea, and have to be extracted thence by tracheotomy ; and that, for one reason or another, it may prove inefficient, and may from time to time have to be discarded in favour of tracheotomy.

Finally, in reviewing once more the treatment of diphtheritic obstruction of the larynx, and with all desire to be just as well as critical, I entirely fail to see that the value of intubation is likely to exceed that of tracheotomy. The treatment of laryngeal diphtheria has hitherto proved so extremely unsatisfactory, that I would be only too glad to welcome any real and practical advance in it, but I fear that this will not be found in intubation ; still it is well that it receive a fair trial at the hands of European surgeons. Too much at present, however, is claimed for the operation. There may be more in it than perhaps one was inclined to admit, but it is unfortunate that the method has been brought into competition with, and has been advanced as superior in value to, tracheotomy.

## **2. Tracheotomy.**

Mr. Walter Whitehead (*Lancet*, April 30, 1887) calls attention to a method of operating which renders the procedure much simpler and easier, as it also is far more bloodless, than the ordinary way of operating by dividing, layer by layer, with the scalpel. The operation is performed as follows. The head of the patient being bent well back over a pillow, an incision is made in the usual situation, but of rather greater length than is common. The incision extends through the skin and fascia, as deep as the interval between the sterno-hyoid muscles. The scalpel is now laid aside, and the raspatory used, not only to separate the sterno-hyoids, but to split the strong fascia which runs down from the hyoid bone to enclose the isthmus of the thyroid gland. This fascia is split to a distance extending from the upper limit of the incision down to the isthmus below, that is, supposing it is desired to open the trachea above the isthmus. Proceeding carefully, the isthmus itself can be pushed down, and the trachea exposed to the necessary extent. The front of the trachea can in this way be cleared perfectly, and since the method is bloodless, the rings of the tube are seen glistening white at the bottom of the wound. The trachea can now be fixed readily between the left index finger and thumb, and opened to the desired extent. There is little or no difficulty in introducing the cannula, since the trachea can be so steadily fixed and the incision into it so clearly seen.

What is urged in favour of the operation is, firstly, the ease with which it can be performed ; secondly, the small number of instruments required ; and, thirdly, the manner in which it meets

the four difficulties usually enumerated, viz. of reaching the trachea, of hæmorrhage, of opening the trachea, and of introducing the cannula. Again, it avoids, in an especial manner, those dangers met with when the operation is performed, as it too often is, practically in the dark, from the bleeding, and the not sufficient separation of the parts. It is impossible in this operation that the cannula should be pushed down between the trachea and the fascia lying in front of it, or that it should be thrust, as has actually happened, into the internal jugular vein.

Tracheotomy is usually one of the first important operations which the young surgeon is called upon to perform, and if he will but keep uppermost in his mind that he must proceed deliberately, that he should tear asunder, not cut, the structures which lie between the skin and the trachea, and that he should not attempt to open the trachea until he can not only feel but see some of its cartilaginous rings, he will find the operation shorn of most of its difficulties, even if it be not rendered absolutely simple and straightforward.

### **3. Operations for stone in children.**

A. Schmitz (*Archiv f. klin. Chirurg.*, xxxiii. Hft. 2, p. 427; and *Centralbl. f. Chirurg.*, No. 3, p. 43, 1887) contributes a most important paper based upon a large and long experience of stone-operations in St. Petersburg, especially the high operation. He records, first, ninety-five operations performed during the last fifteen years on children, amongst which thirty-eight were the high operation; fifteen median section; thirteen lateral section; eighteen lithotripsy; and eleven simple urethrotomy. A large number of cases of the high operation are collected from Russian literature.

The high operation is much preferred, since after it the recovery is very rapid and perfect. The danger, however, is not small. There is risk of wounding the peritoneum; and especially of septicæmia from infiltration of urine. In performing the operation the first procedure was to wash out, and then fill, the bladder with 3 per cent. solution of boracic acid. The rectal balloon was never used, and sutures were not applied to the bladder. The external wound was narrowed, a drainage was placed in the bladder, and another tube in the pre-vesical space. Before antiseptic precautions were adopted, out of eighteen cases of the high operation only eight were cured; of twenty-three done at a later period, eighteen recovered. In the majority of fatal cases, death was the result of septicæmia.

In reviewing the practice of the year 1886, we remarked that

suprapubic lithotomy had suddenly become the "fashionable" operation in the surgery of childhood, but suggested that it had "not yet been submitted to the test of time and experience." The operation must now have been done a large number of times, and on many sides it seems to be well spoken of. True, one hears of high temperature following the operation, of urinary extravasation, and of occasional attacks of pelvic cellulitis, and of delayed healing, and even of death. But, on the whole, the operation is described as simple and straightforward, whilst convalescence has been established in certain cases with extraordinary rapidity. Still, however, the procedure must be considered as on its trial, and in the meanwhile every case should be duly recorded, regardless of its result. We know what an excellent operation lateral lithotomy is in childhood, but on the comparative value in similar cases of the high operation we yet require to be enlightened.

But for the removal of small, friable calculi there is an alternative operation, and in the bright light which is shining about the suprapubic operation we are apt to lose sight of **Litholapaxy** as employed by Bigelow in the adult, and as introduced to us by Surgeon-Major Keegan in the pages of the *Indian Medical Gazette* of 1884-6, for adoption in childhood.

In a valuable paper read at the Dublin Meeting of the British Medical Association by Mr. Walsham, and reported in the *Journal* of Oct. 15, attention is directed to a series of nine cases of rapid crushing in boyhood, and, by a footnote, to a further series of twenty-two cases, every one of which was successful.

It is a matter of regret that boys with small stones are so constantly being submitted to suprapubic lithotomy. Leaving the lateral operation for the moment out of sight, surely such stones, in healthy children at any rate, ought to be crushed and extracted. It is impossible to ignore Dr. Keegan's excellent work, the substance of which he has just produced in a small volume.\*

The chief points in favour of litholapaxy are these:

1. The absence of the risks attending all cutting operations.
2. The absence of all after-annoyance from the urine escaping through the suprapubic wound, should primary union not occur.
3. The rapidity of the cure, the patient being, in the great majority of cases, convalescent the day after the operation.
4. It also possesses, in common with the high operation *versus* perineal lithotomy, the advantage that the genito-urinary organs

\* "Litholapaxy" (Messrs. Churchill).



remain intact, and the danger of emasculation in consequence of interfering with the ejaculatory ducts is avoided.

It is futile any longer to raise theoretical objections to the operation, such as that the urethra and bladder are imperfectly developed, and too small for the manipulation of a trustworthy lithotrite, when some of the boys successfully operated on have been under two years of age, and many have been under three.

The practical points which are worthy of chief importance are thus detailed by Mr. Walsham :

The lithotrite should be fully fenestrated, and the female blade well bevelled, so that no detritus may be retained between the blades, and the risk of nipping the mucous membrane of the bladder may be avoided.

The evacuating catheter should be furnished with an accurately-fitting stylet, in order that any fragment fixed in the eye may be displaced before the catheter is withdrawn.

The meatus should be incised, and no force used in passing either the lithotrite or the evacuating catheter.

The stone should be very thoroughly crushed, as the small size of the evacuating catheter will allow the removal of only small fragments.

Every particle of stone should be removed at one sitting, and the first crushing should be as thorough as possible, so as not to necessitate the frequent passage of the lithotrite and evacuator.

A small aspirator should be employed, to avoid any risk of over-distension or rupture of the bladder.

If the above precautions are taken, I believe that litholapaxy (provided always that, after the incision of the meatus, a No. 5 or No. 6 lithotrite passes readily into the bladder) will be found as simple and as safe an operation in children as it is in adults.

There is, further, one important matter on which the Reviewer would venture to offer a caution : At present the lithotrites which are being used are made with exceeding care, and by workmen of well-known skill and trustworthiness. It will be a very serious matter if, later on, when they are in more general use, they are wrought from metal but little better than that from which the British soldier's bayonet has been made. Even worse than that of a "blank" lithotomy will be the sight of a small child in whose bladder a lithotrite has been bent out of all shape in the endeavour of a surgeon to crush a hard stone ! Even now it will be well in every case of lithotrity to have the lithotomy knife and forceps at hand in case of the occurrence of an accident with the lithotrite, and in case the stone prove too hard to yield to a force which the operator deems it imprudent to exceed.

A few years ago the question of a choice of operative procedures in the case of a boy with a stone in the bladder was never discussed; every calculous boy, as a matter of course, was submitted to Cheselden's operation. At the present day, it would seem that almost with a similar want of discrimination boys are being operated on by the suprapubic method. True, we are not yet in a position duly to appreciate the value of the latter operation: statistics may eventually show that in general application its results are less satisfactory than those of the lateral operation. The appreciation of the operative procedures will probably thus be resolved: Lithotrity after Bigelow's method should be tried for all boys with a single, small stone; but if this prove an oxalate, or too hard for crushing, the boy should be cut. Two very small stones might also be crushed and removed at the single operation. For a hard-ringing stone (oxalate), for a soft, though large stone, and for several stones, a cutting operation must still be chosen. For a large stone, of the size of a pigeon's egg and upwards, the suprapubic operation is to be preferred; but for a moderate-sized stone, which is from hardness or dimensions unsuited for crushing, the lateral or the high operation may be chosen, according to the fancy of the individual surgeon and the ultimate repute of the operation. For my own part, I have yet to learn that for an every-day operation suprapubic is more excellent than lateral lithotomy.

For a boy of about two years and upwards, with a urethra which, when the meatus has been incised, is capable of transmitting a lithotrite of about No 6, English size, whose bladder is healthy, and whose general health is good, Bigelow's operation is best adapted, provided always that the stone is not unusually large, nor very hard, and that it is not one of several stones.

#### **4. A modified operation for hare-lip.**

Mr. Edmund Owen (*Lancet*, August 20, 1887). To obtain the most artistic result in the operation for hare-lip several practical matters demand attention; chief amongst them is this, that the line of operation be so planned that the cicatrix eventually prove as inconspicuous as it is possible for it to be. It should not descend straight from the nostril to the free border of the lip, or it will be sure to invite attention, especially where it traverses the mucous border; and, if the operation be done in the old-fashioned way, the lower end of the linear scar is apt to be permanently indicated by a triangular notch in the free border of the lip. Then, the healing should be prompt, and the line of union thick and strong, and there should be eventually no white scars upon the surface marking the passage of hare-lip pins.



Supposing that the cleft extend into the right nostril, the operation should be begun by paring off the mucous membrane from the right side (but without removing any skin) through the whole thickness of the lip, and that not in the vertical direction only, but outwards almost to the angle of the mouth. (Arteries are best secured throughout the operation by forcipressure forceps.) The mucous border of the lip on the left side of the cleft is to supply the lower border of the right side of the lip, and for this purpose it does not suffice to bring a thin tail of mucous membrane across the cleft, a thick, serviceable flap is needed. This is got by making a bold incision outwards and downwards through the lip with a fine scalpel, then, when the sides of the cleft are drawn forwards by the finger and thumb, the raw surfaces are brought together in the vertical line, and are secured by four or five interrupted sutures of fine wire which pass deeply through the substance of the lip, whilst the full part of the labial flap is brought across beneath the vertical incision to form the prolabium. The rest of the flap, which is not merely mucous membrane, is brought to the right side of the lip, being trimmed and adjusted as circumstances demand. Each case may need some special modification of procedure, but the general plan of the operation as described above remains. There is an economy of tissue, for the mucous membrane on one side of the cleft only is wasted; that of the more promising side, with a good deal of the lip tissue, is brought down to form the border of the new lip. It may be that some weeks after the wound has soundly healed a finishing touch or two may be needed.

"I have now altogether given up the use of hare-lip pins in the operation, and since doing so I have dealt with some of the very worst double clefts that I have ever seen, and to my entire satisfaction. The pins were originally used, no doubt, to keep the strain off the sutures, but the introduction of the improved water-proof strapping has rendered them entirely superfluous. A great disadvantage of the pins was that they were apt to leave the points where they passed through the skin marked by permanent and unsightly scars. To diminish the risk of this to the utmost I had been in the habit of withdrawing them at the end of twenty-four hours, but more recent experience shows that one can obtain better results by discarding them altogether. The sutures should be of fine silver wire passed deeply, and of horse-hair which has been soaked in warm carbolic lotion; the latter answer particularly well for adjusting the mucous membrane. Sutures have also to be used freely and deeply along the dental surface of the vertical and oblique wounds; they should be



arranged as carefully as are those upon the dermal surface. They complete the adjustment of the edges, they steady the tissues, and they prevent food and the tip of the tongue from getting into the wound. For applying them the lip must be thoroughly everted. On a few occasions I have met with a hare-lip after operation in which the bond of union was only of the thickness of the skin; I apprehend that if this posterior set of sutures had been used the adhesion would have been through the whole thickness of the lip. I have never had my attention called to sores upon the tongue or gum from irritation caused by these sutures, and consequently I leave them to find their own way out; the sutures upon the front of the lip I begin to remove on the second day.

“When the operation is finished, I cover the lip with a scrap of absorbent wool, and, drawing the cheeks well together with the finger and thumb, I steady them by a piece of waterproof strapping, the wide ends of which reach nearly to the ears, whilst the middle part is narrowed in proportion to the depth of the lip.”

### 5. Atresia ani.

Jakulowitsch (*Jahrb. f. Kinderheil.*, xxvi. p. 424) describes three cases which he has treated. The first case presented itself in a boy, nine months old, who had a normal anus, but 1 m. up the bowel there was an annular stricture which admitted a sound of medium size. Four days after birth, it was reported, a surgeon had pierced a membranous obstruction in the rectum with a trochar, and widened the opening with bougies; but three weeks afterwards the operation had to be repeated. The case was treated in the clinique by methodical dilatation for a month, and was cured.

The second patient was two days old; there was complete atresia ani and the usual symptoms. The urine was dark in colour. There was no protuberance of the anal region when pressure was exerted on the abdomen. An incision was made in the anal region, and a dissection made as high as the bladder, but no bowel was found; when death occurred, twenty-four hours later a communication was found between the bladder and the termination of the intestine.

In the third case, left inguinal colotomy was performed for occlusion of the bowel but was followed by death.

The author recommends that in deciding the question whether a new rectum or a preternatural anus should be formed, the state of the pelvis should be considered; for narrowing of the pelvis indicates a badly-developed rectum, and in such a case Littre's colotomy is preferred. The author considers that lumbar colotomy is best avoided in children, in which advice the Reviewer heartily concurs.

## 6. Imperforate anus.

Mayo Robson (*Clin. Trans.*, vol. xx. p. 103) suggests a uniform method of operating in imperforate anus, which, however, he intends to refer only to cases where no sign of an anus or bulging of the bowel is present, and where the position of the rectum is entirely unknown.

He proposes that an incision should be made in the perineum in the middle line from the central point to the tip of the coccyx, dissecting onwards carefully until either the rectum is reached or the peritoneum is opened. In the latter case, if the upper part of the rectum be present, it can be brought down, opened, and sutured to the skin; or if there is no rectum, the sigmoid flexure of the colon may be sought for, brought down, opened, and sutured at the anal site. A catheter in the bladder serves as a guide to the position of that viscus, as well as to indicate the line of reflection of the peritoneum from the bladder to the rectum.

Mr. Robson believes that there is less danger in this operation than in opening the colon when no rectum is found; nor does he believe that serious difficulties are likely to arise.

I shall certainly make trial of this method of dealing with those cases of atresia ani in which, after careful dissection up in front of the coccyx and sacrum, I am unable to find the bowel. Hitherto I have always advocated opening the peritoneal cavity in the left iliac fossa, and establishing an anus in the sigmoid flexure; it has proved, in the six or seven instances in which I have resorted to it, an extremely simple and satisfactory procedure. But, of course, it has this great disadvantage, that the anus, should the patient recover, is away from its normal site; and, successful as the issue may be, the surgeon cannot help feeling disappointment with respect to it. Amongst the advantages of Robson's method are these: that the anus is in its normal site, that it is made by a simple continuation of the dissection which failed to reveal the blind end of the bowel; prolapse of mucous membrane is more easily controlled by the forcible approximation of the buttocks; and, later on, by the simple effort of the patient the bowel can be secured against the accidental escape of flatus. So far as I see at present, the chief objection to the operation is that when the peritoneum is opened in the narrow space which intervenes between the sacrum and bladder, the surgeon will run a great risk of bringing down, and of incising, a piece of small intestine instead of large; by touch alone he cannot differentiate between ileum and colon. Satisfied am I of this, that the surgeon is not justified in letting the child die of intestinal obstruction because of sentimental objections which he may have regarding *l'anus contre nature*.

# DISEASES OF THE GENITO-URINARY SYSTEM.

BY REGINALD HARRISON, F.R.C.S.,

*Surgeon to the Liverpool Royal Infirmary.*

---

## **1. Tumours of the bladder.**

Dr. J. H. Neale (*British Med. Journ.*, May 21, 1887) records an instance of adeno-encephaloid cancer of the bladder operated on by Mr. C. H. Marriott, where the wound and perinæum adjoining were subsequently largely invaded with the growth. As bearing upon the treatment of these growths, Mr. Marriott remarks: "This case alone appears to me to put a limit to the range of surgical treatment of vesical tumours. Where a polypoid or pedunculated growth is diagnosed, by all means remove it; but in the case of a sessile tumour closely incorporated with the muscular walls of the bladder, the treatment best suited to the requirements of the case seems to me to be to establish and maintain free drainage, and so relieve the strangury, leaving the tumour to take its own course." In this expression of opinion most surgeons, I think, will agree, and consequently a perinæal opening for exploration and drainage is the course which will be generally adopted. There can be no doubt that an inspection of the tumour and its connections is of much assistance in all cases where exploration with the finger shows that extirpation of the growth is to be proceeded with.

Sir Henry Thompson (*Brit. Med. Journ.*, June 11, 1887) illustrates this point, and remarks: "The result, I think, shows the value of the perinæal exploratory incision, while it in no way interferes with the high operation, which may be generally preferable to the perinæal (*a*) when the tumour is large, or (*b*) placed disadvantageously for removal by the perinæum, or (*c*) when the tumours are numerous and scattered, as occasionally, but not commonly, happens."



I feel sure that the double incision is likely to be still more generally adopted, both in cases of tumour of the bladder as well as for the removal of stones under the exceptional circumstances where the high operation is to be recommended.

**Mr. F. A. Southam** (*Brit. Med. Journ.*, Oct. 18, 1886) and **Mr. Buckston Browne** (*Brit. Med. Journ.*, Jan. 29, 1887) both record instances where the double incision was advantageously made for the removal of tumours from the bladder.

## 2. Suprapubic cystotomy.

Some cases have been recorded during the year which have an important bearing on the respective advantages and risks connected with this proceeding. **Dr. Hume** (*Lancet*, Jan. 15, 1887), in reporting a case, remarks: "The veins in front of the bladder were larger and more engorged than was to be expected, and their walls seemed friable, so that they were torn even with the gentlest handling. Bleeding was thus a troublesome feature of the operation, and some time had to be spent in arresting it." This condition of the veins in front of the bladder probably explains the free secondary hæmorrhage which has in some cases been met with after this operation. An important case is recorded by **Mr. Bond** (*Lancet*, Feb. 5, 1887), where a moderate-sized uric acid stone was removed from an adult male by the suprapubic operation. The bladder wound was closed with sutures, and on the fourth day, in spite of some urine having been driven out by the violent contraction of the bladder, the wound was healed. **Mr. Bond** remarks: "In settling the important question whether, after suprapubic lithotomy, the bladder wound should be left open, and a tube placed in the bladder, or whether it should be sutured and primary union attempted, I think the condition of the urine may be a guide. If that be healthy, other things being equal, primary union will probably result after careful suturing. It seems better to pass a catheter frequently than to leave one in the bladder." Though I think the weight of evidence is, so far, in favour of leaving the wound open, so as to guard against the risk of extravasation of urine taking place and doing damage before it is discovered, there are circumstances where it would be justifiable to attempt to obtain primary union. **Mr. Bond** has certainly indicated a condition which must have consideration in determining this point. Suprapubic cystotomy is to be recommended in some cases where foreign bodies have made their way into the bladder and become impacted. **Dr. Gillon** (*Brit. Med. Journ.*, July 30, 1887) records the case of a man where this proceeding was successfully adopted for the removal of a penholder,  $5\frac{1}{2}$  inches in length, which formed the nucleus of a phosphatic calculus weighing  $2\frac{3}{4}$

ounces. I do not believe it would have been possible to remove this mass by any other means, as the distorted condition of the bladder was the source of much difficulty, the whole bulk of the bladder lying to the left side of the median incision, so that it was necessary to cut through the rectus muscle about half an inch to the left of the linea alba. The circumstances which determined the selection of the suprapubic method are stated to have been: "(1) That probably the calculus had grown considerably, and was most likely attached to the foreign body, thereby making it a considerable bulk. (2) The foreign body being absolutely rigid, and probably encrusted, it would be useless to try and extract it through the urethra. (3) That by the high operation a better knowledge of the existing state of things in the upper part of the bladder could be got, and it could be seen how far and in what way the sacculation of the bladder had occurred." **Dr. E. L. Keyes** (*Journal of Cutaneous and Genito-Urinary Diseases*, July, 1887, New York), in a paper on suprapubic cystotomy for vesical tumours and large calculi, remarks in reference to the selection of this operation: "My conclusion is, therefore, that at the present day, in the case of stone, litholapaxy is the proper operation at all ages. When, for any reason, this operation is not practicable, perineal lithotomy is the operation of choice for small and moderate-sized stones. The high operation is suitable for large stones, encysted stones, some foreign bodies, and for most tumours, and, perhaps, a few other exceptional cases." In the same paper Dr. Keyes records his experience in reference to some of the details of the suprapubic operation. Speaking of rectal dilatation, he remarks: "I have always used the Guyon bag, on account of its smoother surface and greater ease of introduction as compared with the Thompson bag. Both hold about a pint. I have not found it necessary or considered it prudent to distend this bag beyond ten ounces. In making experiments for another purpose upon the living subject with a rectal bag distended with air, I have found it not difficult, with moderate distension, to get a show of blood tinging the mucus upon the instrument on its withdrawal." On bladder dilatation he further remarks: "I have in each case thrown 11 ounces or less into the bladder through a catheter. In none of my cases was the bladder more than faintly visible above the pubis on this amount of distension. I do not know any certain way to decide how much fluid the bladder will stand without rupture, knowing **Pousson's** cases (*De deux variétés peu connues de rupture de la vessie*.—*Rev. de Chir.*, 1885) in warning, where less than seven ounces within the bladder provoked rupture, and **Dittel's** case (*Wiener*

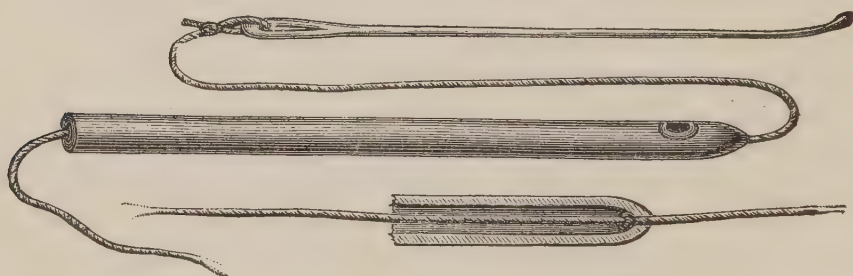


*med. Woch.*, 42 to 45, 1885), where less than three-and-a-half ounces ruptured the bladder. To be safe, I think it neither wise nor necessary to wait until the bladder is seen to project in the lower belly. It suffices perfectly well for all operative purposes that the bladder be so distended that it may be percussed out as a resisting body for a short distance above the pubis." A caution is given in exposing the bladder, "not to work down with the finger in the pre-vesical space, that badly nourished area of loose connective tissue where suppuration is prone to occur after injury, and out of which it is not easy to drain the pus effectively." For the purpose of thoroughly inspecting the interior of the bladder after it has been opened, and kept open for this purpose by the introduction of a silk loop into each side of the incision, Dr. Keyes prefers the Trendelenburg position if there are plenty of assistants, otherwise the electric light. He thus describes the former as "having the knees of the patient crooked over the shoulders of a sturdy and tall assistant, while the pelvis is propped up upon a thick wedge-shaped cushion and pillows, so that the shoulders may be very low, the pelvis high. If now the wound is turned towards a window, by the aid of the loops and retractors the entire inside of the bladder may be freely inspected, the urethral orifice clearly seen, and the mouths of each ureter. The mouth of a ureter may be sponged dry, and then by manipulating the kidney region upon that side, the urine may be observed to spirt and trickle from the mouth of the ureter, and may be caught in small quantities in a spoon-shaped scoop." After describing various methods of draining the bladder through the suprapubic wound, Dr. Keyes states, "I think it is fair to assume that drainage through a large tube from a dependent part of the bladder is a desideratum, and the obvious method of applying this is through the perinæum." For the purpose of draining through the perinæum in these cases of suprapubic cystotomy, Dr. Keyes has adopted the following ingenious device, which enables the operator to do this "with moderate difficulty, but through the smallest possible wound, and with the certainty, I believe, of avoiding hæmorrhage, or other complication."

"I use a large red rubber catheter, size 30, French, with a large eye near the tip. I pass through the lumen of this catheter a piece of coarse brown twine and bring it out at the eye and then with a needle carry it back through the eye and out through the solid point of the catheter. I then make a large knot upon that part within the catheter and draw the knot down until it catches upon the inside of the catheter at the tip. The outside part of the string is now threaded into the eye of a long silver



probe (see figure) which is slightly turned up at its tip. A steel staff with a broad flat groove is now introduced. The operator passes the forefinger of his left hand, pulp upwards, into the rectum, until he feels the apex of the prostate. Then, with a stiff, straight-pointed bistoury, he transfixes the perinæum as near the wall of the rectum as he feels it safe to go and enters the urethra near the apex of the prostate. By slight forward and backward motion, the knife being held with its edge upwards, the whole line of puncture is enlarged just sufficiently to allow the catheter to pass. Now, the silver probe is inserted carefully along the side of the knife until, by a little manœuvring, it enters the urethra and can be felt in the bladder by a finger introduced through the suprapubic wound. Now the knife is withdrawn, the probe pushed onwards and drawn out above the pubis, after



which it is easy, by aid of the string, to pull the large catheter into the bladder. The string is now cut and withdrawn and the catheter pulled down until exactly the length desired is within the body. A stitch of silk is passed through the catheter wall at the point where it enters the body as a mark to the nurse that it must be kept introduced to such a depth."

**Mr. Walter Whitehead** (*Lancet*, June 18, 1887) in recording three cases of suprapubic lithotomy, gives the following reasons for his selection: "The large size of the stone in one case, an impediment to the introduction of a staff in another, and an encysted calculus in the third."

It is impossible at present to arrive at any positive conclusions relative to the application of suprapubic cystotomy; there are many details connected with this operation which must be influenced by such experience as can only be furnished by many impartial observers. In the meantime such suggestions as have been referred to will commend themselves to the careful consideration of all who are about to undertake this operation.

### 3. Rupture of the bladder.

Sir William MacCormac (*Lancet*, Dec. 11, 1886) records two cases of recovery. The nature of the injury in each instance having been diagnosed to be intraperitoneal, the abdomen was opened by a median incision and the bladder explored. A rupture having been discovered, it was carefully closed by sutures, the abdominal cavity being washed out with a warm 1 per cent. solution of boracic acid. The laparotomy wound was then closed. It does not appear to have been necessary to pare the edges of the wound in the bladder, though pains were taken by careful approximation of the sutures to make the bladder water-tight. Carbolised silk sutures were used. In reference to the use of a catheter as well as drainage, it is remarked, "If the rent be sutured effectively the patient runs less risk from moderate distension of the bladder than he does from retaining a catheter for some days within the viscus. The experience of my two cases goes far to prove that the catheter may in many instances be safely dispensed with altogether. I am sure, too, an abdominal drainage tube is not in most cases needful, and that its presence proves a source of danger to the patient." The musculo-serous form of suture was used, and is recommended. As intra- as well as extraperitoneal rupture of the bladder have now been brought within the reach of surgery, too much importance cannot be attached to the correct diagnosis and immediate treatment of this injury. There should be no delay in acting upon the discovery that the bladder is ruptured in such a way as to allow urine to directly enter the peritoneal cavity. There can be no doubt that many lives have been lost, and are being lost, which would undoubtedly have a good chance of being saved by laparotomy. Though the diagnosis of intraperitoneal rupture of the bladder is usually not difficult, Dr. R. F. Weir (*New York Med. Record*, Jan. 22, 1887) has recently employed a method of distension which may be useful in cases where the diagnosis is doubtful. It consists in introducing a Petersen's bag, as used for suprapubic cystotomy, into the rectum and distending it with water. After this is done the bladder is filled with water, and its outline noted as the distension increases. In Dr. Weir's case it was thus demonstrated that intraperitoneal rupture of the bladder had not taken place. It is most important that a distinction should be drawn at once between intra- and extra-peritoneal rupture, for as the former will be now treated by laparotomy, the latter will, with equal urgency, require the performance of perineal section to prevent urine being extravasated about the neck of the bladder and into the porta vesicæ of Retzius. Though great credit is due to Sir William MacCormac

for having brought this operation to a successful issue in two cases, it is only proper to state that **Mr. Christopher Heath** and **Mr. Willett** (*Med. Chir. Soc.*, Feb. 25, 1879) both previously made a similar attempt, but as **Mr. Holmes** observed in the discussion following the reading of the latter papers, the fatal issue was due to the giving way of sutures, so that neither instance could be quoted against the probable efficiency of the operation practised.

#### **4. Cure by operation of hypospadias in the female.**

**Dr. Rabagliati** (*Brit. Med. Journ.*, Sept. 17, 1887), in a case of urinary incontinence, discovered this abnormality, and rectified it by a plastic operation in which the sides of the cleft urethra were brought together by sutures. The case illustrates not only the success of the proceeding, but the importance of making a physical examination.

#### **5. Litholapaxy in male children.**

**Mr. W. J. Walsham** (*Brit. Med. Journ.*, Oct. 15, 1887) illustrates this proceeding, and states:—"I venture to think that for all small and moderate-sized stones it will be the operation of the future in boys and children, as it is in adults." Possibly this may be so in the hands of practised lithotritists, but taking the instance of surgeons who have only two or three cases of stone in children to treat annually, I think lithotomy under these circumstances will still prove to be the safer proceeding.

#### **6. A median lithotomy.**

**Mr. Reginald Harrison** (*Lancet*, June 18, 1887) describes a modification of the median operation which he considers will render it applicable to a larger range of cases. Though the old median operation is probably the easiest way of entering the bladder it is open to two objections—(1) it does not, as a rule, drain well; (2) it only permits the extraction of comparatively small stones. In a case where this proceeding was desirable from the nature of the complications, these difficulties were got over in the following way. The finger having been introduced into the bladder by the ordinary median opening as for exploration, a probe-pointed bistoury was introduced into the bladder by the side of the finger, and the floor of the prostate was divided from within outwards. This permitted the introduction of three fingers' breadth into the bladder, a stone of considerable size was easily removed, there was no hæmorrhage, the drainage was as free and as continuous as after a lateral lithotomy, and the patient made a good recovery. Stress is laid on this mode of dividing the floor of the prostate, as it was found, by numerous experiments on the dead subject, almost impossible to do so by running the knife along the staff *towards* the bladder, as is done in lateral lithotomy. By passing the knife



into the bladder, by the side of the finger, and then cutting *from within outwards*, the object can be attained without incurring risk of wounding the rectum. Though the writer prefers lateral lithotomy, this modification of the median will be found on trial to furnish nearly all the advantages of the former method.

### **7. Catheterisation of the ureters.**

Mr. H. E. Clark (*Glasgow Med. Journ.*, May, 1887) thus refers to this proceeding as applicable to the female :—"To settle our doubts as to the soundness of the right kidney, we again catheterised the ureters. This was done by Dr. Macintyre and myself by means of Pawlik's catheter. The operation is a very simple one, two ridges felt on the anterior wall of the vagina serving as useful and reliable guides which lead the catheter directly to the ureteral orifices. The small quantity of urine removed from the right ureter was in every respect normal, that from the left contained pus, epithelial debris, and a trace of albumen."

As it is important in some instances where operations on the kidney are contemplated to be able to determine the presence, as well as the relative condition of both organs, all means by which this object can and has been obtained should be recorded as forming an important feature in treatment.

### **8. Retention of urine treated by aspiration through a capillary catheter.**

Dr. Ward Cousins (*Brit. Med. Journ.*, Sept. 17, 1887) illustrates the use of the instrument he has invented for this purpose. "The little operation I have described is adapted for all cases of stricture retention. It is a very simple proceeding, and can often be employed as a safe substitute for suprapubic aspiration of the bladder."

In many instances Dr. Cousins' capillary catheter will be found useful; it certainly has two great advantages where the nature of the stricture permits of its being used—(1) it can inflict no damage, and (2) the bladder is emptied slowly. The latter is an important point, too often overlooked in cases of this kind.

### **9. A plea for the more general use of the nitrate of silver in the deep urethra with an improved instrument for its application.**

Dr. E. L. Keyes (*New York Medical Record*, May 28, 1887) states that in inflammatory troubles and irritative disturbances about the deep urethra and neck of the bladder, and in others of a sexual sort, such as pollution, spermatorrhœa, lack of sexual vigour, nervous impotence, imperfect erectile capacity, and the like, he has of late derived signal advantage from the use of nitrate of silver in the deep urethra. The syringe used for this

purpose is, like Ultzman's, open at the end, the nozzle being made of pure silver, so as to prevent decomposition. The injections thus employed commence at one grain to the ounce, gradually increased in strength. Dr. Keyes remarks "a few drops of a nitrate of silver solution, placed accurately in the membranous urethra, in many instances promptly turns the whole course of the malady, and even in grave cases of serious inflammatory disease it often comforts when it does not cure." Though this method of treatment seems to have met with a considerable success in Dr. Keyes' hands, and to have been free from the objection of exciting other complications, it should be reserved for cases where less heroic measures have first been tried and failed. Many sexual disorders, I feel sure, are best treated by general rather than by local means in the absence of any specific complication, such as gonorrhœa or syphilis. Various sexual troubles seem really to be the outcome of too much local attention, and care should be taken to discriminate these from those illustrated by Dr. Keyes, where there could be no doubt much benefit had speedily followed the use of these deep injections when other means had failed.

#### **10. Boracic acid for sterilising the urine.**

Dr. E. R. Palmer (*American Medical Practitioner and News*, August, 1887), draws attention to the importance of "sterilising the urine" in certain cases requiring operative interference with the urethra for the object of preventing the development of urethral fever, which he speaks of as being "due to infiltration of the tissues of the part by a germ-laden urine." Dr. Palmer states that "by the free administration of boracic acid for twenty-four hours before and for some days subsequent to the operation we can render the urine absolutely sterile, and thus escape all danger of urethral fever. I usually employ ten grains in compressed tablets every three hours, though as high as thirty grains every three or four hours may be given without any irritating or otherwise injurious action upon the alimentary canal." It is stated that in forty urethrotomies there was only one case of urethral fever. In this instance the boracic acid was omitted, by some misunderstanding, after the first day. A violent chill, with temperature of  $105^{\circ}$  rapidly following, occurred on the third day. The resumption of the boracic acid arrested the development of further symptoms, and the patient made a good recovery.

The value of quinine as a prophylactic against urethral fever is well recognised. When we remember that something like 75 per cent. of quinine is eliminated by the kidneys, it seems quite reasonable that urine so saturated is unlikely to undergo chemical

changes such as might happen to urine not thus protected. As urethral fever is probably due to the absorption of some poisonous material generated by the urine when placed under certain circumstances, which are now well recognised in relation to a wound, the action of quinine and other drugs which are largely eliminated by the urinary apparatus can thus be explained. If boracic acid on further trial proves to be equally efficacious for this purpose it will be a decided advantage.

### **11. Iodoform injection in cystitis.**

Professor Chandelux (*Lyon Médicale*, June 5, 1887) states that he has found an intra-vesical injection of an ethereal solution of iodoform of service in painful cystitis of a tubercular kind, accompanied with frequent micturition. For this purpose he employs an almost saturated solution. I have also found this application useful in this class of cases, though I have not used a stronger solution than one of 10 grains of iodoform to an ounce of water suspended in mucilage.

### **12. Therapeutic value of recent additions to the genito-urinary pharmacopœia.**

Mr. E. Hurry Fenwick (*Lancet*, Sept. 24, 1887) in a useful paper refers to several new drugs. He speaks highly of naphthalin in causing micrococci to disappear from the urine, and as being generally serviceable when this excretion is foetid. Strophanthus seems to exercise power in controlling rigors, and other drugs, such as the stigmata maidis, pine or spruce extract, and piché, were found useful in renal colic. I can bear testimony to the great value that is attached by the natives of Peru to an infusion of piché in cases of hæmaturia and cystitis. It appears to act as a sedative and astringent.



# VENEREAL DISEASES.

By ALFRED COOPER, F.R.C.S.,

Surgeon to the Lock Hospital.

---

## 1. The general treatment of syphilis.

A paper on this subject was read by Prof. Kaposi at the Medical Congress held last year at Wiesbaden (*Viertelj. f. Derm. und Syph.*, Heft 4, Hälfte 1, 1886). He commenced by asserting that the destruction of the initial lesion by caustics, and its removal by excision, were of very questionable utility, and that the idea of removing indurated glands and cutting through lymphatic vessels was simply absurd. With regard to treatment, Kaposi prefers inunction, as yielding the best effects, local and general. Sublimite baths are useful in children, and for extensive ulceration in adults. The drawbacks to the hypodermic injection are the pain and abscesses so often caused. For internal administration, Kaposi prefers calomel and tannate of mercury. Comparing mercury with the iodides, he prescribes the former for all skin affections, early and late; for diseases of the bones and parenchymatous organs, and of the cerebro-spinal system in the acute stages. He gives the iodides for the later stages of nervous disorders, for joint affections, and syphilitic headache; they are not suitable for the first symptoms. The mercurial treatment must be energetic in acute affections, and continued for lengthened periods. Sulphur baths, sea baths, and hydropathic treatment in general, are not believed by Kaposi to possess any specific remedial properties.

## 2. Excision of the initial sclerosis of syphilis.

In an inaugural dissertation, published last year at Breslau (*Viertelj. f. Derm. und Syph.*, ii. 1 Hälfte, s. 403, 1887), Herr Boehm has collected 672 cases in which the primary induration was excised. Rejecting eighty-seven cases as untrustworthy, there remain 585, of which 139 gave a positive result, while in 446 symptoms of constitutional syphilis sooner or later appeared. In some of the successful cases, the patients were not under

observation for a sufficiently long time, and in a few others the syphilitic nature of the disease was not positively demonstrated. With regard to the unsuccessful cases (which formed 76 per cent. of the whole), it is alleged (1) that the excision was not sufficiently thorough; the sclerosis reappeared in the cicatrix in nearly one-fourth of these cases; (2) that no attention was paid to the state of the glands; and (3) that the excision was performed too late. Herr Boehm thinks, however, that the number of successful cases justifies the belief in the efficacy of the operation as a means of preventing the disease from becoming constitutional, and recommends its performance whenever practicable.

### **3. On the various methods of treating syphilis.**

In the *Annales de Dermatologie et de Syphiligraphie* for March, 1887, and in some previous numbers, Dr. Doyon gives a somewhat lengthy account of the methods at present in vogue for the treatment of syphilis, and endeavours to estimate their value. He describes Diday's plan as follows: "The influence of mercury is reserved for the moment when some very decided manifestation takes place, and which, in spite of all hygienic and dietetic precautions, fails to disappear. It is also to be used when the disease attacks some important organ, or threatens to interfere with the exercise of some essential function." This method is contrasted with Fournier's, which is thus described: "Its object is to destroy the syphilitic virus; in other words, to attack the cause and to neutralise the effects. The agent used for this purpose is mercury, an antidote to syphilis, and efficacious alike during the active stage and during the period of latency." This method consists of courses of treatment, in definite order and at regular intervals, and continued for three or four years. Dr. Doyon points out that the individuality of the patient must be taken into consideration; but he advocates Fournier's system, subject to such modifications as may be required in given cases.

### **4. The treatment of syphilis by mercury.**

At a meeting of the Medical Society of London, in February last, Mr. E. Milner read a paper on the different modes of administering mercury in syphilis, and the indications for their application (*Lancet*, March 5, 1887). He endeavoured to arrive at some definite conclusion as to what preparation of mercury should be employed in order to get rid of the visible signs of syphilis as rapidly as possible. Dealing with three of the most common methods of administration, he discussed: 1. Some of the cases in which the green iodide should be used. 2. Some of the cases in which inunction should be practised. 3. Some of the

cases in which the vapour of calomel should be employed. He recommended the green iodide for the vesicular and early tubercular syphilide ; inunction for primary syphilis in healthy, abstemious, light-haired men, and for large syphilitic testicles, secondary gummata and syphilitic nervous disease ; the vapour of mercury was stated to be especially suitable for cutaneous sores and for ulcerations of the extremities, especially the legs, syphilitic in their origin but frequently associated with a weak state of the constitution. The vapour of calomel, locally applied, was also recommended for the red, angry, tubercular eruption on the line of the hat-leather. In the course of the discussion, Mr. Brudenell Carter referred to the lesions of the eye, and especially of the retina, which were met with in the tertiary stages, and especially in individuals in whom the mercurial treatment had been inadequately carried out.

### **5. Syphilis treated by the long-continued administration of mercury.**

Prof. J. Caspary, of Königsberg, points out (*Viertelj. f. Derm. und Syph.*, i. s. 3, 1887) that although Fournier is usually credited with having been the first to recommend this plan of treatment, its importance had been insisted upon at a still earlier date by Van Buren and Keyes, who advised small doses of the iodide of mercury continued for months, or even years. The subject was discussed at a Medical Congress recently held at Wiesbaden, Prof. Neisser expressing himself very strongly in favour of prolonged treatment, even in the absence of any decided constitutional symptoms. Caspary also favours this view, trusting rather to clinical experience than to any theories as to the nature of the syphilitic virus. He believes, however, that a specific bacterium will ere long be demonstrated. Alluding to the changes of opinion which have taken place on the subject of treatment, he mentions the extreme views now held. The late Prof. Zeissl, who in 1864 regarded mercurial treatment as absolutely essential, in 1882 was a strong opponent of it. Sigmund's opinion also changed in the same direction, though not to the same extent. Fournier, on the other hand, has become more positive, and has increased the period during which mercury is to be given ; while some of his followers have gone beyond their master in their advice as to the duration of the course. Caspary gives a table containing 100 cases treated and watched by him during the last thirty years, the treatment consisting either of inunction of mercurial ointment or of the subcutaneous injection of the perchloride. No definite information is, however, given as to the length of the treatment ; in some of the cases it



was carried on for several months. The results appear to have been very satisfactory. Reinfection occurred in three cases, at intervals of seven, ten, and eleven years respectively. In but very few cases did the offspring of the patients exhibit any trace of the disease.

#### **6. The treatment of the earliest stage of syphilis.**

This oft-discussed subject formed the basis of a paper read by Herr Lipp, of Graz, at the 59th "Naturforscher-Versammlung," held recently in Berlin (*Viertelj. f. Derm. und Syph.*, i. s. 209, 1887). Very decided views were expressed as to the importance of early mercurial treatment, the most effective form of which, according to Herr Lipp, is subcutaneous injection, with which, however, internal administration should be combined. Seven female patients were treated on these principles. All presented the initial symptoms of syphilis and glandular induration. In two, as a result of treatment, no constitutional symptoms had appeared by the forty-second and ninety-second week respectively. Of the other five patients, four showed secondary symptoms of a mild character. For injections in the first case calomel was used, and the tannate of mercury was given internally. In the second, the perchloride was injected. The author considered that the results obtained justified his belief in the efficacy of mercury as an antidote to syphilis.

#### **7. The prophylaxis and treatment of syphilis.**

In the *Klinisk Aarbog*, for 1886, Prof. Bidenkap, of Christiania, expounds his views on these subjects. He has not much faith in police regulations as a means of preventing the spread of the disease, though he thinks that the attention of "boards of health" ought to be turned to this subject, and to that of illegitimate children, through whom the disease is often conveyed to other persons. With regard to the possibility of communicating syphilis through vaccination, Prof. Bidenkap states that he has not met with a single case of this kind during an experience (as physician-in-ordinary to the town) extending over twenty years, and dealing with at least 30,000 children. In the treatment of the disease, Bidenkap discredits the efficacy of any so-called abortive measures, such as excision, caustics, etc.; he applies mercurial ointment, or iodoform. He does not, however, regard a course of mercury as necessary for the treatment of syphilis; if patients are favourably situated, he thinks that the disease will almost always spontaneously subside. Tonics are indicated before the outbreak of general symptoms. If there be headache and pains in the bones and limbs, he gives iodide of potassium in moderate doses. When the eruption appears, he prescribes warm

baths and rest. If the symptoms become severe, he gives the iodide with sarsaparilla and occasionally mercury, from which, however, he does not get such good results as from the two former drugs. He finds sarsaparilla very efficacious in obstinate relapsing papular forms, and in severe ulceration. In the early stages this drug is useless ; but later on, and especially in much debilitated cases, its good results are often very striking. In the malignant forms of syphilis, iodide of potassium should be given, with tonics and stimulants. During the subsequent course of these cases, sarsaparilla, and even mercury, may be useful ; but the latter is sometimes mischievous. Even for iritis, a symptom which Bidentkap does not consider very serious, he refrains from prescribing mercury. When the morbid processes of the secondary stage become localised in the nerve centres, as occurs in some cases at an early period, mercury should be given, combined with iodide of potassium. The latter with sarsaparilla is the remedy for the gummatous stage. As a local application, especially for obstinate papular eruptions, he recommends goa or chrysarobin plaisters. For congenital syphilis in infants, small doses of calomel are the most efficacious ; at a later stage sarsaparilla and the iodide should be given.

### **8. Is mercury an antidote to syphilis ?**

This question was discussed in a paper read by Dr. C. R. Drysdale at the meeting of the British Medical Association, in 1886 (*British Medical Journal*, Nov. 27, 1886). After alluding to the germ theory of syphilis, Dr. Drysdale mentioned several authorities who state that mercury given during the period of the chancre sometimes entirely prevents the appearance of any further symptoms of the disease. Dr. Drysdale is not able, however, to support this view, for although he has tried scrupulously to carry out the treatment recommended, he has never been able to prevent the occurrence of some form, more or less slight, of secondary eruption, whether mercury was used or not. He quotes the experience of Lancereaux and of Diday, as in harmony with his own. Dr. Alfred Fournier, he alleges, is silent as to the antidotal power of mercury, and affirms that it does not prevent the outbreak of secondary symptoms, though he is thoroughly convinced that it lessens their severity and prevents the occurrence of tertiary lesions. Dr. Drysdale does not believe that mercury is capable of meeting the germ of syphilis in the blood, and of nipping the disease in the bud, and he regards it as settled that small doses, such as one grain of mercury with chalk or one-fourth of a grain of the green iodide, are all that should be given, perhaps twice or thrice daily, to attack the germs, while



not interfering with the patient's health. He gives one-sixth of a grain of the green iodide for two years if the patient will consent to continue the treatment. He thinks that in this way the occurrence of tertiary symptoms can be prevented. Iodide of potassium he regards as the antidote for tertiary syphilis.

### **9. The intermittent treatment of syphilis.**

In the *Centralblatt für klin. Med.*, No. 41, 1886, Dr. Lewentaner, of Constantinople, refers to the fact that at the Wiesbaden Medical Congress, the principal syphilologists, except Neisser, were enthusiastic in recommending the old method of treating syphilis, that is, of administering remedies only when eruptions appear. He thinks that the social side of the question was entirely lost sight of during the discussion. The danger is always present, both to the patient and to those with whom he comes in contact. Delay in treatment may involve the setting in of nose affections, perforations and destruction of the palate, syphilis of the brain, disease of the liver, etc. Chronic cases of rupia and ecthyma are the results of this faulty method of treatment. On the other hand, the advantages of having the patient continually under observation, as well as being able to enlist his obedience in all matters of diet, hygiene, etc., because of the promise which may be held out to him of a permanent cure, are very apparent. Dr. Lewentaner thinks that the data furnished by Fournier's experience constitute a most effective argument in favour of the principles maintained by Neisser.

### **10. The question as to the absorption of mercury by the skin.**

Professor Ferrari, who so long ago as 1873 contended that mercury, when inunction is practised, is not absorbed by the skin, but inhaled in the form of vapour by the lungs, has lately re-investigated this question (*Viertelj. f. Derm. und Syph.*, ii. 2 Hälfte, s. 624, 1887). His experiments were performed under the following conditions: 1. While the frictions were being made the patient breathed pure air, and not that of the room in which the treatment was being carried out. 2. The ointment was proved to be free from any trace of rancid fats, which form soluble salts with mercury. When inunction was being practised, the patient's head was encased in a helmet, fitted with two tubes for inspiration from, and expiration into, the outer air. The parts of the body untouched by the ointment were covered over with impermeable tissue, and after the completion of the inunction, the surfaces to which the ointment had been applied were similarly enveloped. Five patients were thus experimented upon, and the urine was carefully examined during the course of inunction and after its



completion. In no case in which the above-mentioned conditions were fulfilled could mercury be detected in the urine; but if they were not observed, the mineral was invariably to be found in that secretion. From these experiments the following conclusions are to be drawn: 1. Metallic mercury is not absorbed by the skin. 2. If it get into the system, as a result of inunction, the lungs are the channel through which it has been absorbed. The mercury is volatilised by the friction. If mercury pass through the skin, the absorption is due to the fact that the ointment has been badly prepared, and contains small quantities of salts of the metal. The cases are, however, too few in number to admit of any absolutely certain conclusions, and in order to disprove absorption, other secretions ought to be examined.

### **11. The volatilisation of mercury during inunction of the ointment.**

This subject has recently been experimented upon in **Tarnowsky's** wards in St. Petersburg (*Viertelj. f. Derm. und Syph.* ii. 2 Hälfte, s. 625, 1887). The test of absorption was the presence of mercury in the urine of the patients and nurses. Forty cases were examined, with the following results: 1. In rooms in which inunction is practised mercury is certainly absorbed with the air in breathing. 2. The quantity thus taken up in fifteen days is equivalent to that absorbed from the inunction of one drachm of the ointment, and so on in proportion to the time. The nurses who make the inunctions are liable to absorb the mercury by the lungs.

### **12. Carbolate of mercury in syphilis.**

**Dr. Karl Shadek**, of Kieff (*Lancet*, May 7, 1887), has been using this preparation in his private practice for several months. It is prepared by precipitating a very dilute solution of perchloride of mercury by means of a concentrated alcoholic solution of potassium carbolate. A nearly white, tasteless, amorphous powder is obtained after sundry manipulations; the dose is about the eighth of a grain in a pill, three or four times a day. It is said to be well borne, and not to interfere with digestion. In some of **Dr. Shadek's** cases the treatment was continued for six or eight weeks without producing colic or other unpleasant symptoms. Thirty-five cases were thus treated; in five there was swelling of the gums and salivation. Mercury was found in the urine after the third dose. The efficacy of the drug was especially noticed in macular and tubercular eruptions, and in syphilitic psoriasis of the palm and sole. Mild cutaneous symptoms subsided in from two to four weeks; a somewhat longer time was required for papular and pustular eruptions and

syphilitic affections of the mucous membrane. Multiple enlargements of glands were but little affected by it. In children of from two to four years old, doses of about the fifteenth of a grain, twice a day, were well borne.

### **13. The treatment of syphilis by subcutaneous injections of calomel.**

This method is being freely employed by many surgeons on the Continent, especially in Germany and Russia. (*See "Year Books of Treatment,"* 1884, p.180; and 1885, p. 191.) In order to avoid causing pain and inflammation, Dr. Balzer (*Viertelj. f. Syph. und Derm.*, ii. Hälfte i. s. 408, 1887) suspends the calomel in vaseline oil, in the proportion of .05 gramme of the former to 1 gramme of the latter. Syphilis is said to be cured by thus injecting .4 gramme of calomel. The same remedy is also used in Prof. Neisser's wards in Breslau, olive oil being employed for its suspension. The results are said to be very favourable. Another surgeon, Dr. Stoukownikow, states that from 3 to 9 grains of calomel, used in this manner, are equal in their effects to 30 to 40 inunctions, of half a drachm each, of blue ointment. Neither abscesses nor stomatitis were observed in any of his cases. On the other hand, Dr. Lantz, of St. Petersburg, states that injections of calomel are often followed by violent pain, and sometimes by abscesses; stomatitis and salivation are also common. He does not think that calomel is preferable to any other mercurial preparation. He has tried it in eighty-two patients; at first he used calomel suspended in mucilage, and afterwards the following emulsion, recommended by Neisser:  $\mathcal{R}$  Calomel, natr. chlorat.  $\bar{a}\bar{a}$  1.0 to 1.5, gummi Arabic. 0.5 to 0.75, aquæ destill. 11.25, m. ft. emulsio; for twelve injections: 307 injections were performed. Abscesses were noticed after two per cent. of the injections, and in ten cases there was salivation and stomatitis. The effect upon the symptoms was rapid and marked; but for gummatous affections the calomel seemed to be far inferior to the iodide of potassium.

### **14. The treatment of syphilis by subcutaneous and intramuscular injections of preparations of the iodides.**

This method of employing iodine has been used by Von Szadek (*St. Petersburger med. Wochenschrift*, Nr. 29, 1886) in eight cases, ninety injections being made. About five grains of the iodide of potassium or sodium were used daily; twenty-six injections were made under the gluteal aponeurosis, and the remainder under the skin. The injections caused more or less pain, which lasted sometimes for several hours, the effect being less marked after

the deep injections than after the superficial ones. No abscesses formed, but in two cases an eruption of acne was noticed. With regard to effect upon the disease, the cases are too few to admit of any positive conclusion, but in two patients who had been subjected to scarcely any other treatment, the symptoms decidedly improved.

### **15. The results of the hypodermic treatment of syphilis in the French hospitals.**

In *The Journal of Cutaneous and Genito-Urinary Diseases*, New York, Sept., 1887, an interesting account is given of the various methods of treating syphilis by hypodermic injections in vogue in the French hospitals. There is great diversity of opinion as to the relative merits of hypodermic and other modes of administering mercury. At the St. Louis, Besnier, who has experimented largely with the hypodermic method, has now practically abandoned it. Du Castel, at the Hôpital du Midi, employs injections of calomel suspended in oil of vaseline; five centigrammes of calomel are used the first time and ten afterwards, an interval of eight days being allowed to elapse between the sittings. The injections are made deeply into the gluteal muscles. Balzer, at the Lourcine, employs the yellow oxide (ten centigrammes to one gramme of oil of vaseline), and the injections are repeated every ten or fourteen days. The writer of the article does not report favourably of the results of the treatment. He saw several cases which proved quite refractory to it, and his own impression is that it will never supplant the older and more classic modes of introducing mercury into the system. He quotes a conversation he had with Fournier on this subject. Fournier disapproves of the treatment, as being disagreeable and painful to the patient, interfering with his vocation, and necessitating frequent visits. It is possible in hospital practice, but patients leave the Du Midi and Lourcine, where this treatment is employed, and flock to the St. Louis, where they know they will not receive it.

### **16. On the use of cocaine for the prevention of the pain attendant on hypodermic injections.**

The treatment of syphilis by hypodermic injections of mercury is liable to be attended by two drawbacks, viz. the formation of abscesses, and more or less severe pain. The former may be almost entirely prevented by great care and cleanliness of the instrument, and Dr. Mandelbaum (*Annales de Dermatologie et de Syphiligraphie*, May, 1887) recommends cocaine to be added to the mercurial solution, in order to lessen the pain. His formula is as follows: R Muriate of cocaine .05 gramme,



bicyanuret of mercury .01, distilled water 1 gramme ; for one injection.

### **17. Hot-air baths as adjuncts to the mercurial treatment of syphilis.**

Prof. Frey (*Berlin. klin. Woch.*, No. 48, 1886) strongly recommends hot-air baths for patients who are undergoing a mercurial course. These baths fulfil several purposes. 1. They enable the surgeon to determine whether the patient is cured ; this question can be answered in the affirmative if twenty baths produce no fresh eruption. Likewise, if 15 to 20 baths cause an eruption to disappear, it is in all probability not of a specific nature, but due to mercury ; if the eruption persist, it is due to syphilis. 2. To eliminate the mercury from the system. Frey thinks that the drug acts beneficially for a short period after its absorption, but that after it becomes oxidised in the tissues its effects are prejudicial. Its removal is therefore advisable. 3. For therapeutical purposes. During a mercurial course it is important that the nutrition of the patient should be promoted, and this effect is produced by the baths, which tend to accelerate tissue change. Moreover, they render the skin more capable of absorption. As a general rule, subject to modifications depending upon the patient's age and condition, Frey prescribes a bath followed by inunction, then, on the second day, a hot-water bath with soap and the inunction. This latter is repeated on the third and fourth days, and a hot-air bath is taken after every four inunctions.

### **18. Dry hot-air baths for syphilitic patients.**

Dr. Stepanoff, of Moscow, has devised a plan of treating patients suffering from syphilis which has resisted mercurial and iodine treatment (*Lancet*, June 25, 1887). The patient is placed in a box or bath, fitted with an iron bottom and lined with thick felt. By means of two Bunsen's lamps, the bath is heated to from 170° to 190° Fah. After the patient has been "baked," he is put to bed, and covered with blankets, so as to prolong the sweating process for an extra half-hour. After this he is allowed to dress and go into the ward to his dinner, etc. These baths are said to have the effect of eliminating mercury from the system with great rapidity, and of greatly improving the condition of the patient. A subsequent course of mercury is found to act quickly and energetically.

### **19. The treatment of infantile congenital syphilis.**

M. Jules Simon (*Viertelj. f. Derm. und Syph.*, ii. 1 Hälfte, s. 402, 1887) invariably prescribes mercury for syphilis in adults, and gives it in the forms of Ricord's pills (iodide of mercury with

opium); Van Swieten's liquid (corrosive sublimate 0·1, and 100 grammes of alcohol); Gibert's syrup (the red iodide of mercury with iodide of potassium); and likewise by inunction. For hereditary syphilis, he recommends prompt and energetic inunction, and the internal administration of Van Swieten's liquid, 10 to 30 drops four times a day, in milk. If the mother cannot suckle the child, a wet-nurse must never be provided; artificial feeding must be carefully carried out. M. Simon does not recommend sublimate baths, except in cases of severe skin affections; they tend to weaken the child, and are not devoid of danger. In the later stages, he gives Gibert's syrup. He considers it to be very important that such children should be kept under continuous observation for lengthened periods, and that the mercurial treatment should be renewed on the slightest reappearance of any suspicious symptoms.

During the twelve months covered by this Year-Book, the various medical periodicals have contained many communications on the treatment of syphilis. No new preparation of mercury (the carbolate excepted) has been brought to notice; but the value and importance of mercurial treatment appear to be more and more recognised. The method of hypodermic injection is being largely tested in France; but, as might be expected, the results are not satisfactory. Fournier's opinion (quoted in para. 15) may be taken as expressing the general view of those surgeons who have had much experience in the treatment of syphilis. Such treatment, to be effectual, must be long-continued, and we do not require the experience of the French hospitals to convince us that patients will not submit to hypodermic injections, with the attendant suffering, for a period sufficiently lengthy to be of any real use. It cannot be too emphatically asserted that the disappearance of external symptoms is not equivalent to the cure of the disorder. Mr. Jonathan Hutchinson's recently published work on Syphilis is a valuable contribution to medical literature, and contains a clear and simple exposition of the rules for treating the disease. Mr. Hutchinson recommends small doses of mercury, *e.g.* one grain of mercury with chalk, four times daily, and continued for six months; the treatment to be commenced as soon as the diagnosis is made. A very different idea of the value of mercury is expressed by Von Zeissl, in his *Outlines of the Pathology and Treatment of Syphilis*, recently translated by Dr. H. Raphael. According to this authority, syphilis should be allowed to spend its fury, and mercury should not be given until eight or ten weeks have elapsed after the first eruption, unless the latter is

too slow to disappear under expectant or iodine treatment, or dangerous phenomena supervene, threatening some of the organs of sense, viscera, or central nervous system. If the eruption has not disappeared in eight weeks, Zeissl gives iodine; if no improvement after eight weeks of this treatment, mercury is used in the form of Zittmann's decoction or by inunction. The iodine treatment, if satisfactory, should be continued for a year. Dr. Raphael does not adopt Zeissl's method, but prescribes mercurial inunction as soon as he has satisfied himself of the syphilitic nature of the primary lesion. Of other recent works on Syphilis, the most important is Dr. Theodor Rumpf's *Die Syphilitischen Erkrankungen der Nervensystems*. It contains a most minute account of all those disorders of the nervous system which may fairly be attributed to the influence of the syphilitic poison.



# THE DISEASES OF WOMEN.

BY D. BERRY HART, M.D., F.R.C.P.E.,

*Lecturer on Midwifery and Gynecology, Surgeons' Hall, Edinburgh; Assistant Physician, Royal Maternity and Simpson Memorial Hospital; Assistant Gynecological Physician, Royal Infirmary, Edinburgh.*

---

## I. General survey.

The year 1887 has not been marked by any great discovery in treatment. The tendency has been rather to critical consideration of accepted methods, as well as to a trial of some plans we may term the less heroic. Abdominal section has, on the whole, held its ground in the multifarious diseased conditions where it is employed as a means of cure, the only notable exception to this being the attempt to apply Apostoli's electrical treatment to those fibroid tumours for which the removal of the appendages, or hysterectomy, has been usually employed. Whatever this general attention in Great Britain to Apostoli's method means, it at least points to a dissatisfaction with the mortality attending removal of fibroids by abdominal section.

Massage of chronic peritonitic and cellulitic deposits is being advocated by some of our Swedish and German *confrères*, and seems to yield fair results in suitable cases.

Two gratifying features have marked this year, viz., the decadence of what may be termed the Mechanical School, *i.e.*, those who regard a flexion or version as the great and only lesion to be treated in a gynecological case; and the growing attention paid now to pathology. Gynecological treatment has, as a rule, not been based on accurate pathology; indeed, the great rôle hitherto in pathology has been to discredit or overturn accepted methods of treatment. We hope, however, that this will in time be reversed, and that treatment will more and more be deduced from accurate pathological investigation. Ovarian pathology is the most conspicuous instance of this, and early operation in ovarian tumours is the direct outcome of accurate ovarian pathology.

Pathological investigation has, on the whole, strengthened the position of the growing school which advocates laparotomy in

diseases of the uterine appendages, but much requires to be done in this special line.

There has been no special contribution to Emmet's operation for cervical laceration. Vaginal total extirpation of the uterus for malignant disease is making rapid progress in Germany, but elsewhere its practice is almost *nil*.

Steady progress is, therefore, the verdict for 1887.

## 2. Genital tuberculosis.

Hegar (*Die Entstehung, Diagnose und chirurgische Behandlung der Genital Tuberculose des Weibes*: Stuttgart, Enke, 1886). The treatment advocated is alone summarised, but we may remark that Hegar adopts Koch's views, and points out that the bacillus tuberculosis has been discovered in the diseased fallopian tube.

### *Prophylaxis.*

Hegar claims that tuberculosis must be considered among communicable diseases. The marriage of the phthisical is to be forbidden, and phthisical patients should not be classed with those suffering from other diseases. Puerperal women should not be attended by phthisical nurses, and all phthisical sputum and secretions should be prevented from bringing about secondary infection.

### *Treatment.*

Although the early stages of colpitis and endometritis have not been observed, their radical cure by curetting and iodoform is possible.

Advanced genital tuberculosis may require extirpation of the uterus *per vaginam*, supra-vaginal amputation, or salpingotomy (salpingectomy?) with castration. The prognosis in such operations, so far as ultimate cure is concerned, is better than in carcinoma.

### *Indications.*

The removal of tubercular tubes and ovaries, as well as of the uterus, is indicated when the disease is confined to these organs and there is no tendency to quiescence or retrogression. Even when not isolated, operation may be performed, when the other lesions are having no injurious effects or are latent or healing. Recent tubercular peritonitis is not a contra-indication.

### *Contra-indications to operation.*

One should not operate on tubercular genital conditions when the tuberculosis is advanced in other organs, that in the genitals playing only a secondary rôle; when the general nutrition of the

patient is low, or where the organs are very much infiltrated. The abscesses or cavities may, however, be opened in the usual way. Extirpation of the uterus *per vaginam* must be rare; affections of the mucosa passing deeply should not be treated by curetting, etc., and when the tubes are also affected the difficulties will be great and the arrest of bleeding uncertain.

In such, one would proceed with abdominal section and supra-vaginal amputation, as the cervix is usually only so far altered that the stump can be treated for tuberculosis afterwards. The separation of adhesions is easier in this way, and the extra-peritoneal treatment of the stump is advantageous.

Salpingotomy and castration can be employed when the disease is limited to the tubes, ovaries, and adjoining parts of the broad ligaments; or when simultaneously affected, the uterus can be treated later by intra-uterine methods.

Hegar points out that one may require, in operating on the appendages, to enucleate the mischief from the broad ligaments; he warns also that the error of mistaking the surface of the broad ligament affected must be guarded against, *i.e.*, when the disease is on the posterior lamina one must not perforate the anterior lamina to reach it.

As an example of how he treats complicated cases, Hegar describes that he sutured one adhesion to the abdominal wound, and also, to arrest parenchymatous hæmorrhage in Douglas's pouch, penetrated into the posterior fornix vaginæ, and, plugging the recto-vaginal space with iodoform gauze, brought the end of the plug through the aperture into the vagina, removing it in two days. The result was good.

When the broad ligaments are thickened and rigid, the elastic ligature may be used instead of silk.

Finally, simple abdominal incision, and the application of iodoform powder to the peritoneum in tubercular peritonitis, or the opening of exudations through the vaginal fornices and tamponnade with iodoform, are given as methods of treatment that may give good results when extirpation is impossible.

*Results.*—In six cases of removal of tubercular uterine appendages Hegar has had one death. In the others the results were good.

One case is appended fully.

#### CASE IV.

*Phthisical heredity; dysmenorrhœa; convulsive attacks, especially during menstruation; menstruation scanty; primary tuberculosis of the tubes; castration and salpingotomy; discovery of bacilli; condition good 14 months afterwards.*



The patient was 23 years of age, nullipara and phthisical. Menstruation began at 16, was regular, lasted three or four days, with colicky pains in the sacrum and abdomen. Condition good between the periods. When 22 years of age patient had a fright, which caused attack of dyspnoea; pains in the limbs, which returned at her menstrual periods or after exertion. The periods have also been less, and lasted only one day.

5 v., 1885. Condition good. Vaginal entrance narrow; vaginal portion of cervix, 2 cm. long, bluish red, with swollen posterior lip. Cervical mucous membrane hyperæmic, with mucopurulent discharge. Os uteri points to front, and cervix lies in vaginal axis. Isthmus uteri high, and to the back. Body of uterus markedly anteflexed. Two bands are felt in the pelvis passing from right edge of the uterus, the upper beginning at the fundus angle in a swelling. On the left side there are two cords, the lower passing to a thickened body at the level of the linea terminalis. On rectal examination the conditions are more evident, and the right utero-sacral ligament is felt thickened and tense. On the right and left sides one feels cords and nodulated or beaded bodies.

14 v., 1885. Abdominal section and removal of appendages. Many adhesions.

The right tube measures 12 cm.; the mesial part is about the thickness of a lead pencil, has narrow lumen and thickened walls. The lateral portion ends in a tumour the size of a goose egg, with purulent and cheesy contents. Right ovary has small cysts. The left tube is as thick as the thumb, and the portions between its swellings are about the thickness of a lead pencil, with hypertrophied walls and narrow lumen. Fimbriated end closed as on right side. Ovary much as on right side, with many miliary nodules in the wall (of the tube). Tubercle bacilli found on microscopical examination.

Final result good, with lung improvement.

### **3. On Palliative Incision of Tubercular Peritonitis.**

Schwarz (*Wiener Med. Woch.*, Nos. 13—15) first points out the great safety of abdominal section, a fact that is now beyond dispute. In relation to palliative incision in tubercular peritonitis, he collects the following series of cases:—

The first known case of operation for tubercular peritonitis was in 1862 by Sir Spencer Wells. On abdominal section he found marked tubercular disease. The exudation was removed, and the patient lived ten years without return of the fluid.

CASE II.—Dohrn operated on a child, four years of age, in

1878. In 1879 there were no physical signs of fluid, and the child's condition was good.

**Naumann** records four cases in which abdominal section was performed. Two died from sepsis, and one recovered. There were no carbolic acid injections of the peritoneum or use of iodoform in these cases, but simply a careful peritoneal toilette with carbolised sponges.

Hegar's case is already given (see p. 222).

**Lindfors** records a case similar to those above. In Schröder's "Klinik" a case was operated on, and iodoform applied to the peritoneum. Nine weeks afterwards there was no ascites, and the patient was well and strong.

The following cases by **Koenig** had additional treatment by carbolic acid or iodoform:—

(1) In 1883. Diagnosis: ovarian tumour or peritoneal exudation. On abdominal section tuberculosis peritonei was found, with diffuse miliary nodules. Peritoneal cavity washed out with carbolic lotion, and space of exudation rubbed with iodoform. A month afterwards, no fever and no exudation.

(2) Much the same as above. Two years afterwards the patient was well and able to work.

(3) Patient 26 years of age. Diagnosis: right tubercular kidney; an incision in the lumbar region. Kidney found healthy. Abdominal section then performed, and widespread diffuse tubercular disease of the ascending colon, and beneath the peritoneum of the intestine. This in 1881.

Death in 1882 from general tuberculosis.

(4) Patient 23 years of age. Marked peritoneal tuberculosis, with abundant flocculent serous exudation. Bacillus tuberculosis found in piece of omentum. Iodoform applied. Patient well three months afterwards.

**Boerner** records a case where he washed out the peritoneum with weak corrosive sublimate. Result good.

The following case in Breisky's Klinik is given in detail. It may be briefly stated, however, that there was tubercular lung disease and tubercular peritonitis. Abdominal section was twice performed as fluid reaccumulated. Result good ultimately so far as abdomen concerned, but lung disease advancing.

Schwarz finally sums up the seventeen cases he has collected as follows:—

Age: youngest, four; eldest, fifty-seven. Usual age, seventeen to thirty-three.

The best *results* were obtained by simple incision, removal of exudation, and no drainage after closure of wound.

The *longest freedom from further mischief* ranged from ten years to two years.

The conclusions he comes to are as follows :—

1. When peritoneal tuberculosis is diagnosed, abdominal section and not puncture should be adopted.

2. The exudation should be cleared out by a dry method and the wound closed.

3. Youth is no contra-indication.

4. Operation need not be withheld if lung condition not too far advanced.

#### **4. Palliative incision in tubercular peritonitis.**

Hofmøkl (*Wiener med. Woch.*, No. 16, 1887) here records an interesting and complete case. The patient, admitted to hospital May 11, 1886, was seventeen years of age, and came of a sound family. When eleven years old had small pox, and began to menstruate when fifteen. Eight months before admission she had profuse menstruation without evident cause, and since then the abdominal circumference had increased. State of nutrition on admission tolerably good; lungs normal; cardiac dulness somewhat increased transversely; pulse, 90; temp. 37.5° C. The abdomen was much distended, abdominal walls tense, and left abdominal half more distended than right. No free movable tumour could be felt, and on percussion of the abdomen in the horizontal posture there was in the lateral dependent portions, dulness on the left, but a tympanitic note on the right. Alteration in position of patient gave no special change of note.

On vaginal examination: slight leucorrhœa, *portio vaginalis* virginal and uterus movable. In front and behind the uterus, resistance felt but no tumour.

May 12.—Puncture of abdomen and 6 litres of a sticky brown fluid removed. One could then feel in the middle line of the abdomen a tumour about the size of a child's fist. Microscopic and chemical examination of the fluid showed white and red blood corpuscles, alkaline reaction and precipitate on addition of acetic acid and boiling. The nature of the fluid was in favour of tubercular peritonitis, while the good condition of the patient, especially of the lungs, and the presence of the tumour did not exclude the possibility of another lesion.

On abdominal section, miliary tubercle of the peritoneum was found. Immediate recovery good.

Patient was well for six months, and then died on Nov. 25, 1886.

On post-mortem examination: chronic tuberculosis of the peritoneum; tubercular ulcers in bowel; slight tubercles in lung apices, and large caseous nodule in the left one.



The small tumour felt in the abdomen after puncture was a portion of omentum adherent to bowel.

### **5. A case of cured peritoneal tuberculosis.**

Poten (*Centralbl. f. Gynäk.*, Jan. 15, 1887). The patient seemed cured after abdominal section. The chief interest in this case is that Poten removed a small portion of the peritoneum with a miliary nodule and found the bacillus tuberculosis in it. The detection of the bacilli was difficult, but undoubted specimens were found in giant cells.

For additional cases see undermentioned papers :—

### **Case of tubercular peritonitis treated by laparotomy and washing-out.**

Knaggs (*Brit. Med. Journ.*, Nov. 5, 1887).

### **Case of tubercular peritonitis cured by washing out the abdominal cavity with a one per cent. solution of carbolic acid.**

Clarke (*Ibid.*).

### **6. Ueber hæmatocele periuterina.**

Gusserow (*Archiv f. Gynäk.*, Bd. 29, Hft. 3). This is a valuable contribution to the question of active treatment of periuterine hæmatocele, *i.e.*, hæmatoma or blood extravasation into the connective tissue of the pelvis. Eight cases are recorded.

*General remarks.*—While undoubtedly intraperitoneal hæmatocele is the most frequent form, the existence of extraperitoneal blood effusions (apart from the puerperium) has been satisfactorily established. In one of Gusserow's cases the effusion was undoubtedly in the left broad ligament, in three others it was more doubtful. He points out that in hæmatoma of the broad ligament the upper boundary of the effusion half spherical in shape is felt markedly, while the lower portion in the recto-vaginal space is not so marked. On the other hand, in intraperitoneal effusion, the upper boundary is only felt after the pouch of Douglas is markedly bulged. The hæmatoma of the broad ligament is also lateral while the intraperitoneal form is mesial. In hæmatoma, also, one cannot pass the finger between the side wall of the pelvis and the effusion, while it can be done anteriorly and posteriorly.

As the cause of hæmatoma we may have rupture of a vein, rupture of a fallopian tube in pregnancy between the folds of the ligament, or dissection in the same way by a hæmatosalpinx.

In none of his cases did Gusserow get distinct evidence of an extra-uterine gestation being the cause.

Eight cases are then recorded where active treatment of the hæmatoma was undertaken in the following manner :—

The vagina was carefully disinfected by douching with corrosive sublimate (1:2000). The most prominent part of the swelling was then punctured with a lancet-shaped knife, and the incision enlarged if necessary. The cavity was then washed out by means of a catheter with salicylic acid solution, and the edges of the wound sutured, so as to prevent their union. In all, the sac was emptied as thoroughly as possible, a large drainage tube inserted, and the vagina tamponned with iodoform gauze. During the further treatment one, or at the most two, injections of the sac daily through the tube with salicylic acid solution were necessary.

Gusserow holds laparotomy to be unnecessary in such cases, urging that the vaginal incision is simpler, and that if laparotomy be performed, drainage through the posterior fornix is also necessary to clear out clots.

It must be noted that Gusserow holds that the greater number of hæmatoma cases get well with mere rest, and advocates active treatment only where absorption is slow, where the patient cannot give the necessary time, or where there is great local pain. The risk of septic infection is very small, but it has yet to be settled if, in such operation cases, there is not more risk of return than in those where absorption is slow, and the natural pathological result undisturbed.

#### CASE IV.

Patient confined on Sept. 8th, 1884. Had eclampsia apparently and forceps. Recovery complete.

In March, 1885, bleeding came on at her menstrual period, lasted fourteen days, returned on several occasions, and there were also radiating pains and difficulty at stool. On May 5, 1885, she sought admission to hospital. On examination the cervix was low and close behind the symphysis. The uterus, slightly ante-flexed, was made out easily through the anterior fornix and from above. Douglas' pouch and the right parametrium were occupied with a very large tumour filling the true pelvis and bulging the vaginal fornix. This swelling lay close on the posterior uterine surface, could not be pushed up, but had a slight antero-posterior mobility. By vaginal incision, on May 19th, the blood sac was opened, a considerable amount of old blood clots removed, and the further treatment conducted as already described.

On June 18 the patient was cured. The incision wound was closed, the uterus was in pelvic axis, and movable without pain, lying a little to the right side, and with its mobility a little

hindered by some thickening in Douglas' pouch. General condition good.

### **7. The use of massage in diseases of the female pelvic organs.**

**Resch** (*Centralbl. f. Gynäk.*, No. 32, August 6, 1887). The idea of curing pelvic inflammatory indurations and uterine displacements by means of local massage originated with a Swedish layman, Major Thure Brandt. His method did not gain ground out of Sweden until recently, when it has begun to be tested in Germany by Bandl, Schultze, and others. Resch here gives a sketch of the indications and contra-indications for massage, as well as of the best method of carrying it out. The cases for massage may be grouped as follows:—

1. Chronic and subacute cellulitis, causing displacements of the uterus and annexa.
2. Retro-uterine hæmatocele.
3. Chronic metritis.
4. Slackening of the uterine ligaments; descent and prolapse of the uterus.

Acute inflammatory affections, gonorrhœal affections of the appendages, and acute metritis are contra-indicated for massage.

The first group is the most typical for this treatment. One endeavours, by circular and stroking movements, to accelerate the local circulation, and hasten the absorption of the inflammatory products through the lymphatics. The index finger is to be passed into the vagina, and the part to be massaged fixed against the pelvic wall, while the outer right hand performs the massage. Professor Asp uses the external hand alone; but while this takes away the difficulty in regard to vaginal exploration, it prevents thorough treatment. Prochownick recommends beginning with external massage. It is evident, however, that one cannot deal properly with old parametric exudations unless by external and internal massage, and the same objection applies in the case of adherent ovaries, adhesions deep in Douglas' pouch, or in metritis.

At first it is advantageous to massage twice daily for five or six minutes; afterwards the length of time may be increased and more pressure used. In some cases the index finger may be passed into the rectum and the thumb used vaginally. Slight rises of temperature may occur in the evening, but are of no importance. The massage should be interrupted during menstruation, according to most authors; but Nissen recommends it strongly then and Resch agrees with him. The latter author points out, however that it must be done cautiously.



In retro-uterine hæmatocele the massage may be begun ten to fourteen days after its occurrence, and results are said to be good. Massage is also recommended in cases of prolapse of the uterus, and the results are said to be markedly good. In prolapsus an assistant is required to elevate the uterus, and then external massage is employed by another, who passes his fingers deeply behind the pubis and, carrying them up, lifts, as it were, the prolapsed organs. The bladder must be empty, and the "liftings" are repeated three or four times in a daily sitting, from four to eight weeks. He reports three cures in five cases. The genu-pectoral posture is used for ten minutes after the massage, so as to diminish intra-abdominal pressure. General treatment, good hygiene, and rest are also recommended with the local treatment.

### **8. The technique of massage.**

**Reibmayer** (*Wien*, 1886). From Reibmayer's work on massage we extract his description of massage of the unimpregnated uterus. Two methods are recognised, external and internal. The external method is simply ordinary massage applied in the lower abdominal region, the fingers being passed deeply into the true pelvis. In stout women it is impossible often to carry it out. Internal massage is simply the practice of the bimanual, the inner finger steadying the part to be rubbed while the outer performs the massage. One great difficulty in carrying out "bimanual massage" is the irritation it may give rise to in a certain class of patients. This difficulty may be got over by its being carried out by a nurse; but here again skilled knowledge of the disease is wanting.

### **9. Massage in gynecology.**

**Profanter** (*Vienna*, 1887). The results of massage in chronic inflammatory affections are given here. The tests applied were satisfactory, inasmuch as the cases were examined before and after treatment by Schultze of Jena, whose accuracy in the diagnosis of such affections is well known, and whose views are not so well known or acted on in this country as they should be. The massage was carried out in Schultze's wards by Brandt and Nissen, who, of all men, were most competent to do so, and the cases so treated are recorded by Profanter.

The whole question has thus been put to a most satisfactory and searching trial, with the result that Schultze believes that "the massage of the pelvic organs, especially the method of Brandt, is of great value in stretching old cellulitic fixations of the uterus and restoring the tone of the slackened supports of the prolapsed uterus."

CASE I.—*Chronic utero-sacral cellulitis; chronic ovaritis; slight cystitis.*

On the 18th November, when massage was begun, the condition was as follows: movement of the uterus to the front hindered, left uterosacral ligament thickened, short and painful on traction. Left ovary slightly painful on pressure. Treatment: systematic friction on left utero-sacral fold and massage of left ovary. In about thirteen days the pain in the head, constipation, and general pains were removed, and the normal mobility of the uterus restored.

Several cases of chronic inflammatory affections are recorded as treated in a similar manner, with good results. Even marked cellu-  
litic deposits were greatly improved by it.

[One can understand the value of massage in old adhesions, but in prolapsus uteri it is difficult to see how it acts. Even bad cases are always benefited by mere rest.]

### **10. On the unsatisfactory results of unilateral removal of the uterine appendages.**

Tait, Lawson (*Brit. Med. Journ.*, June 4, 1887). Mr. Tait records here the ultimate results of twenty-seven cases of unilateral removal of the uterine appendages up to Dec. 9th, 1884. One case proved fatal. The successful ones are classed as follows:

					Case.
Abscess of ovary	...	...	...	...	1
Chronic ovaritis with adhesion	...	...	...	...	2
Hæmatosalpinx	...	...	...	...	4
Hydrosalpinx	...	...	...	...	4
Pyosalpinx	...	...	...	...	15

The ultimate results in these cases have been as follows: twenty-two of the women maintained marital relations, but only three have become pregnant. A second operation has been necessary in four, and in the cases of pyosalpinx five have already died in circumstances making it evident that the other tube had become diseased, ruptured, and caused death. Seven of the cases, he considers, will require a second operation; and thus thirteen of the twenty-six operations have proved to be absolute failures.

Tait believes, therefore, that unilateral operations on the uterine appendages are unsatisfactory, and should not be performed unless the patient refuses the double operation.

### **11. Three hundred additional cases of complete ovariectomy, and twenty cases of exploratory operation.**

J. Knowsley Thornton (*Lond. Med. Chir. Trans.*, vol. lxx., 1887) gives here an exhaustive account of 300 cases of completed ovariectomy, tabular details being drawn up in the way first introduced by Sir Spencer Wells. He adds, however, columns giving

the highest temperatures and pulses recorded by each patient after operation.

The routine treatment in each case after operation is to inject 20 minims of laudanum, in an ounce of tepid water, into the rectum as soon as the patient feels pain. If additional doses are necessary, they are given at short intervals, until two or three have been employed. Clear beef-tea (three ounces without salt) is also injected into the rectum every three hours, with 20 minims of laudanum every other time, until the patient can take food by the mouth. The other details of Mr. Thornton's treatment do not seem to vary much from that of other operators.

All the operations were performed with full antiseptic precautions with admirable results, 100 consecutive cases having occurred without a death from septicæmia.

The mortality in the entire series of cases was 7 per cent. This he compares with the 25 per cent. and 13·12 per cent. of Sir S. Wells in his cases published in 1877 (300 ovariectomies) and 1881 (512 ovariectomies) respectively. Mr. Tait's mortality in 405 cases has been 8·15 per cent. ; while in 150 cases by Mr. Thornton himself, published in 1881, the death-rate was 10 per cent. The mortality was nearly equal in nursing-homes, private houses, and hospitals. The cases that recover were usually convalescent during the first eight days. In twenty-five cases some cooling method was necessary, either by the ice-cap or partial or complete cold pack. The commonest cause of any rise in temperature was the onset of metrorrhagia or menstruation, and sweat-rash. The sweat-rash in one case seemed responsible for one temperature of 106·2, which yielded to ice pack of arms and legs for four hours.

One startling fact brought out is that in many of the cases malignant disease causes death, and in all the sarcomatous cases there were recurrence and death in a year at least. One interesting fact, now well known, is that tapping is "directly responsible for most of the recurrences ;" rupture of cysts into the peritoneum is the next most frequent cause. "The only way to render these accidents less common is to make early ovariectomy the rule. I would further sum up this matter by saying never tap, and, given an ovarian tumour distinctly to be diagnosed, perform ovariectomy without delay" (pp. 49 and 50).

As to the causes of death, there were four from septicæmia ; three from secondary hæmorrhage or exhaustion ; one from diarrhoea and exhaustion ; two from shock ; two from exhaustion of malignant disease ; two from exhaustion ; one from suppression of urine ; one from tetanus ; one from pedicle abscess ; two from



intestinal obstruction; one from peritonitis; and one from embolism.

### **12. Three hundred and eighty-four laparotomies for various diseases.**

Homans (Boston : Sawyer and Son, 1887). This is an interesting record of cases, and comprises 282 ovariectomies, twenty-seven hysterectomies, ten removals of appendages, as well as several rarer diseases which need not be enumerated here. The first five non-antiseptic ovariectomies all died. After that Dr. Homans used Listerism, and has had thirty-four deaths and 284 recoveries in his subsequent ovariectomies.

In hysterectomy for uterine tumours his mortality has been ten in twenty-seven, or a little more than thirty-three per cent.

In five cases where the appendages were removed for bleeding fibroids there was one death, one was not benefited, one had a fair result, and in two it was good.

The appendages were removed in five cases for the cure of nervous disorders. Three were utter failures, one was very brilliant in its result, and one fair.

The best case was that of a young lady with "moral insanity," who was perfectly cured by the removal of the ovaries.

Dr. Homans would, therefore, discourage removal of the appendages in such instances.

Tables are appended, giving the results in most of the operations. The pamphlet is interesting, and very honest.

### **13. On the treatment of fibroid tumours of the uterus by electricity, with observations and complete statistics of all the cases so treated from July, 1882, to July, 1887.**

G. Apostoli (*Brit. Med. Journ.*, Oct. 1, 1887) first points out the defects in the previous use of electricity for fibroids as consisting in—

1. The employment of the electricity in a vague and variable manner.
2. The absence of any means of estimating the force of the current used.
3. The feebleness of the current; its exclusive extra-uterine use, with the disadvantage of its not acting on the uterine cavity, and further risk of trouble from the puncture being made through the abdominal walls.

Apostoli has by his method avoided these defects by—

1. Estimating by means of a galvanometer the strength of the current employed.
2. Using strong currents (50 to 150 and 250 milliampères).

3. Employing a new electrode in the form of wetted clay, so as to make the pole applied to the skin innocuous.

4. By localising the internal pole, passing it *per vaginam* either into the uterine cavity or into the substance of the fibroid.

5. By keeping the action under control from the exclusive use of the unipolar method. This gives a chemical cauterisation in the fibroid uterus.

By the unipolar method Apostoli means that the clay electrode prevents almost entirely the interpolar action; *i.e.*, the electricity acts mainly on the uterus by the internal pole.

He recommends the positive pole internally when hæmorrhage is to be checked, either by a single quick or successive slow applications.

The negative pole he believes to have a congestive action on the uterus when used internally. Apostoli, therefore, holds that with the positive pole internally he can check hæmorrhage by a galvano-chemical cauterisation; while by the negative pole used internally "the interstitial circulation of the uterus, thus momentarily stimulated, will be hurried on, and a regression of the non-hæmorrhagic fibromata is the consequence either of this state of congestion or the supplemental and artificial hæmorrhages which take place." Whatever this quoted portion means, Apostoli recommends the internal use of the negative pole in cases of fibroids accompanied by amenorrhœa and dysmenorrhœa. For his method Apostoli claims that it is easy, simple, accurate, antiseptic, and well borne by patients, who are, in addition, not kept from necessary work.

The rule for the use of the poles is, therefore, positive pole internally for hæmorrhage, negative pole internally for non-hæmorrhagic cases.

In those cases where the sound cannot be introduced into the cavity, galvano-puncture is to be employed. This requires the precautions of antiseptic douching of the vagina before and after puncture; shallow punctures (1 to 2 cm.) usually through the posterior fornix with a steel trocar, avoiding any pulsating vessel. No speculum is to be used, the finger acting as a guide.

*Results.*—Apostoli claims that reduction of the tumour may be obtained in a month, and that in some months it may decrease from  $\frac{1}{5}$ th to  $\frac{1}{2}$  in amount. It also tends to free itself from local attachments, and may become superitoneal. In 95 per cent., hæmorrhage, pain, and nervous disturbances are suppressed.

The following are the statistics of those cases where the continuous current was employed:—

July, 1882, to July, 1885, 5,201 applications of galvanic

currents. These were made in the following diseases—fibroids, polypi, uterine hypertrophy, subinvolution, acute and chronic metritis and endometritis, ulcerations of the cervix, perimetritis, parametritis, ovaralgia, ovaritis and periovaritis, salpingitis, ovarian and tubular cysts (early), atresia, hæmatocele.

These electrifications were made on 403 patients with two deaths: in one the ovarian cyst was suppurating, and death (from intraperitoneal gangrene) was the result. Ten periuterine inflammations were caused or aggravated, these results being set down to negligence of antiseptic measures and the too intense use of the negative pole.

In regard to his cases of fibroids, Apostoli has treated 278 cases (1882—1887), and in these there has been permanent benefit in 95 per cent.

Apostoli further states that seven of the patients under his charge were led by impatience to seek removal by surgical means, and all of these died.

The following papers may be consulted:—

#### **14. The galvanic treatment of uterine fibroids.**

Cutter (*Amer. Journ. of Obst.*, Feb., 1887) describes his method, and has had in his fifty cases—thirty-two of non-arrest, four deaths, twenty-five arrests, three relieved, and eleven cured.

#### **15. The treatment of uterine and periuterine affections by Apostoli's method.**

Elder (*Brit. Med. Journ.*, June 11, 1887) gives an account of a visit paid to Apostoli, and reports favourably.

Webb (Series of Letters, *Brit. Med. Journ.*, May 7, 1887, *et seq.*).

#### **16. Contribution to myomotomy and castration in fibroids.**

Wehmer (*Zeitschr. für Geb. und Gynäk.*, Bd. xiv., Hft. 1, p. 106). This may be compared with Apostoli's work. Wehmer here gives statistics of thirty cases operated on by Kaltenbach.

There were three cases of removal of subperitoneal fibroids and twenty-seven of supravaginal amputation. The subperitoneal myomata were treated intraperitoneally, and all patients recovered.

In six of the cases treated by supravaginal amputation the tumours were very large. One had grown rapidly, and two were complicated with pregnancy. In others the indications for the operations were pressure consequences either on bladder, rectum, or sacral plexus. In one there was hydronephrosis. The most



frequent indication was, however, hæmorrhage. The age of the patients varied between 29 and 54.

Of the twenty-seven supravaginal, five were treated intraperitoneally according to Schroeder's method; twenty-two were treated extraperitoneally, either by the method of Péan (3) or Hegar (19). The following was the general method of operating:—The tumour was exposed by abdominal section, and turned out of the abdomen. The spermatic vessels and, if necessary, the round ligaments were tied, and then the elastic ligature placed round the cervix. The cervix was never transfixed by the ligature. The stump was then stitched to the peritoneum of the abdominal wall and the peritoneum was also united behind the ligature, and to the edges of the broad ligaments. Catgut was used to bring peritoneal edges together, and fascia and skin were united with silk. The stump was then transfixed with needles cross-ways, and these made to rest on pads. The cervical canal was carefully disinfected with corrosive sublimate (1:1000), and the stump cauterised with zinc chloride and thermo-cautery. The space between the stump and abdominal walls was then filled with chloride of zinc wool. Iodoform was found toxic, and, later, a mixture of salicylic acid and tannin (1 in 3) employed.

When the fibroid had developed into the broad ligament, the portion so developing was enucleated. For this purpose the ovarian vessels and round ligaments were tied, and the peritoneum over the intraligamentous portion incised and the tumour enucleated. The remains of the cervix were then sutured, and treated extraperitoneally with the elastic ligature.

In the after-treatment the dressing was changed as seldom as possible. Temperature rise was usually found to be due to putrefactive changes in the centre of the stump, and disinfection of this lowered it.

Adhesions and hæmorrhage were the chief complications. In one case the bladder was torn. The torn part was sutured and treated extraperitoneally. In a similar case of Schroeder's the bladder was treated intraperitoneally, and the patient died from infiltration of urine.

Gusserow records two similar cases treated extraperitoneally, with one death not depending on the bladder condition. Iodoform caused poisonous symptoms twice, sublimate once.

Lung embolism was observed in four cases—in anæmic women with weak hearts. The mortality was as follows:—Of the five cases where the pedicle was treated extraperitoneally, three died (60 per cent.); in the twenty-seven where the stump was extraperitoneally, only one died (4·5 per cent.).

The causes of death in the intraperitoneal cases were septic peritonitis, embolism of the right pulmonary artery, and septicæmia respectively.

**17. Thirty-eight cases of hysteromyotomies treated extraperitoneally.**

C. v. Braun (*Wiener med. Woch.*, No. 22, 1887). In the thirty-eight cases recorded here, Braun has had a mortality of 15·5 per cent. Three of his cases did not require section of the cervical canal, and were all successful. The mortality of the thirty-five, therefore, where the canal was cut was 17·1 per cent. Pain, disturbance of the functions of the bowel and bladder from pressure, and severe bleeding, not yielding to less severe measures, were the chief indications.

**18. Harveian lectures on cancer of the uterus.**

J. Williams (*Lancet*, 1887). In these lectures Dr. Williams advocates supravaginal excision of the uterus for carcinoma cervicis if the parametrium is sufficiently free. Cancer of the vaginal portions begins in the squamous epithelium of the cervix, and tends to spread laterally to the vaginal fornix. Cancer of the cervix proper begins near the external or internal orifices of the cervical canal, tends to spread into the parametrium, and not up into the body of the uterus. He holds, therefore, that in those cases where the lateral spread has not occurred, the vaginal extirpation of the whole uterus, so much practised in Germany, is unnecessary and more dangerous.

**19. Sixty cases of total extirpation of the cancerous uterus.**

Fritsch (*Archiv f. Gynäk.*, Bd. 29, Hft. 3, 1887). Total extirpation of the uterus for malignant disease has to be specially considered from the standpoint of immediate mortality and return. Fritsch endeavoured to obtain the results in sixty cases operated on by him. Post-cards were sent to the patients or the medical men in charge, and the results given in a tabular form. Those patients from whom no reply was received were considered as "dead from recurrence," while those who reported themselves as well were held to be cured. The results are as follows. Those who recovered after operation usually left the hospital on the tenth or fourteenth day: bad results were not found to result from this. The immediate mortality was 10 per cent., a mortality less than one would have expected, especially as Fritsch operated on evidently bad cases.

As to return of disease, the following result is given :—

Case	1 with no return in	...	...	yr's.	mos.
				3	2
2	"	"	...	3	1
10	"	"	...	2	7
11	"	"	...	2	4
12	"	"	...	2	3
14	"	"	...	2	1
15	"	"	...	2	1
18	"	"	...	2	0
20	"	"	...	2	0
21	"	"	...	1	11
22	"	"	...	1	10
23	"	"	...	1	10
32	"	"	...	1	6
35	"	"	...	1	5
37	"	"	...	1	3
39	"	"	...	1	2
44	"	"	...	0	10
45	"	"	...	0	10
46	"	"	...	0	10
56	"	"	...	1	2

Volkmann's statistics for mammary cancer show that in 131 cases

7	returned in	...	...	1 month
23	"	"	...	2—6 months
12	"	"	...	7—12 "
5	"	"	...	13—18 "
6	"	"	...	19—24 "
1	"	"	...	25—36 "

Volkmann is of opinion that in mammary cancer if there is no return in a year, one is hopeful of cure; if no return in two years, cure is generally certain; while no return after three years means cure, almost without exception, certain.

It is also evident that the chances of return after operation for uterine cancer are less than after cancer in other organs. In Fritsch's cases two are cured, seven cured in all probability, and the others (11) are, so far, past the time for return.

## 20. The statistics of vaginal total extirpation of the cancerous uterus.

A. Martin (*Berliner klin. Woch.*, No. 5, Jan. 31, 1887) here gives the statistics of cases of his extirpation of the uterus *per vaginam* since 1880. Prior to this date he had performed six total extirpations according to Freund's method, all fatal.

In the first table all the cases of radical extirpation are given. These are sixty-six in number, and were all performed by Martin, with the exception of six operated on by Düvelius.



The results are the following :—

*Mortality* : 18 per cent. (11 in 66).

*Causes of death* : septicæmia, 5 ; collapse, 1 ; anæmia, 4 ; embolism, 1 ; general cachexia in bronchial catarrh, 1.

In 44 cases recovered from the operation there were 29·7 per cent. returns and 70·3 per cent. cures.

In a third table the results of twenty-eight incomplete operations are given, and these, of course, are highly unsatisfactory.

## **21. A contribution to the therapeutics of pruritus vulvæ.**

H. v. Campe (*Centralbl. f. Gynäk.*, No. 33, 1887) here narrates a case where he used the constant current in obstinate pruritus vulvæ. The anode was placed in the vulva, and the kathode moved over the affected skin, care being taken not to interrupt the current. Great improvement took place at once, and a cure was effected in about a month.

## **22. The dry treatment in gynecology; practical details; the remedies, their use and application.**

G. J. Engelmann (*Amer. Journ. of Obst.*, June and July, 1887). By the term "dry treatment" Dr. Engelmann means the treatment of uterine, circumuterine, and vaginal diseases by the use of powders impregnating cotton, wool, or jute in the dry state.

*Materials.*—The powders used are bismuth, iodoform, boracic acid, borax, alum, tannin, oxide of zinc, and charcoal.

The substance employed as a carrier of any of these powders is preferably wool or plain cotton.

Medicated cotton may also be used. These he classifies as—

1. Antiseptic: borated, &c.
2. Alterative: iodized.
3. Astringent: iron, cotton, alum, &c.

*Method of use.*—The tampon should be  $2\frac{1}{2}$  to 3" by 1 to  $1\frac{1}{4}$ ", requires a thread attached to it, and is placed in position by means of the Sims's speculum. Before doing so the vaginal vault is dried, the necessary powder applied, and then the tampon passed. It may be left in for a period varying from 36 to 48 hours. The indications for this treatment are much the same as those already well known in the case of the glycerine tampon, and may be considered as medicinal, supporting, alterative, and absorbent; as a splint; antiseptic, support to instruments, and as rest-giving in general. He condemns the glycerine tampon as causing discharge, and becoming solid and irritating.

## **23. Juniper catgut: its uses in gynecological operations.**

A. Martin (*Amer. Journ. of Obst.*, Oct., 1887) here states his

belief that the use of the continuous suture with catgut is a great advance in gynecology, although his early experiences with it were not quite satisfactory.

The catgut is prepared as follows :—That known by the trade-mark “Wiesener” (Hartmann, Heidenheim), thicknesses Nos. 2 and 3, is wound on glass plates, and soaked in  $\frac{1}{10}$ th per cent. solution of corrosive sublimate for six hours. It is then removed, dried with a clean towel, and soaked in a solution two parts alcohol and one of oil of juniper. It is ready for use from the sixth day on, the quantity required for each operation being removed and placed in the preservative lotion used at the time. This catgut has great tenacity, can be readily tied—the knot employed being a triple one.

*Method of use :—*

(a) *For superficial wounds.*—Begin at one end, making a double knot after passing the suture below the depth of the wound. The short end is then held by an assistant's forceps, and the suture employed to stitch the rest of the wound continuously until the other end of the incision is reached. The short end of the catgut and the needle end are now tied, if near enough ; or, when the ends are far apart, by keeping the last turn slack and tying it to the needle end of the thread.

(b) *For deep wounds.*—The wound is stitched from the deepest part up in as many tiers as may be necessary, and the ends knotted in either of the ways above described.

Two mistakes are to be avoided : viz., too tight stitching, and breaking the thread. In the latter instance a deep stitch is passed and knotted where the thread has broken.

In all his plastic operations Martin avoids vaginal irrigations, only rinsing the external parts with weak carbolic after urination. When the operation is for tear into the anus, he keeps a soft rubber tube in the rectum to allow escape of flatus, and also injects through it lukewarm oil on the fourth day. On the fifth or sixth day a laxative is given, and the fæces, softened by the oil, more easily passed.

The patient, after such operations, should remain at rest for three weeks.

The special results are as follows :—

1. *Perineoplasties.*—Here the cicatrised surfaces were freshened and united. Union in all cases (21).

2. *Rectoplasties.*—Eight cases ; all cured.

In cervical operations Martin has found the juniper catgut not so satisfactory, and now uses silk. He has also employed it in laparotomy for myomata, and bringing the edges of the

peritoneum together, with satisfactory results, and recommends further trial here.

The matter may, therefore, be summed up by saying that in perineal plastic operations it suits admirably ; not quite so well in cervical operations ; very well in uniting peritoneal edges ; and fairly well in some special cases of enucleation of fibromyomata by laparotomy.

One objection to it is the irritation it sets up in the operator's fingers if used repeatedly.



# MIDWIFERY.

BY GEORGE ERNEST HERMAN, M.B., F.R.C.P.,

*Obstetric Physician to, and Lecturer on Midwifery at, the London Hospital.*

---

## **1. Pregnancy and measles.**

Klotz (*Arch. für Gyn.*, Bd. xxix.) relates four cases of measles occurring in pregnant women. In three (pregnant respectively three, seven, and eight months) uterine action came on spontaneously and terminated the pregnancy—in one case on the fourth, in two on the fifth, day of the disease. Delivery was in no case followed by unusual hæmorrhage, nor did pneumonia occur. The two premature children were born living and healthy. In the fourth case the patient, seven months pregnant, passed through the measles and went to term. Klotz quotes from Underhill seven cases of measles in pregnancy, in five of which premature labour came on; and from these data he concludes that measles, as a complication of pregnancy, is very apt to lead to its interruption. He discusses the reason of this, and finds it to be an “exanthematic endometritis.” Anatomical examination has shown the existence of hæmorrhagic endometritis in cholera, typhus, and smallpox; but no such change has yet been discovered in measles. Klotz bases his belief in the presence of this morbid condition on the after-history of his patients. The three who were delivered prematurely, all suffered after the measles from irregular and too copious menstruation, with leucorrhœal discharge; and pieces of the uterine mucosa, removed by the curette, showed signs of endometritis. All four patients became pregnant again within six months. The only one who went to term was the one who had passed through measles without interruption of pregnancy. In two of the others there was placenta prævia, leading to premature labour, and the third aborted in her subsequent pregnancies at the end of three months. Klotz quotes from various observers to show that chronic endometritis is apt to persist during pregnancy (as decidual endometritis) and after

it; and also that endometritis stands in a close causal relation to placenta prævia.

The cases which have led the author to these generalisations are too few in number to establish them; but they are very suggestive, and, if confirmed by further observations, important.

## **2. Typhoid fever in pregnancy.**

In a discussion on this subject, reported in the *Lyon Médical* (Mars 6 and 13, 1887), **M. Vincent** related three cases treated by cold baths, with the result not only of not inducing premature labour, but, as he believes, of preventing it. **M. Clement** spoke in favour of antipyrin, which he had given to several pregnant women—in one case as much as 8 grammes (5ij) in the day—and in all the pregnancy had continued its course. According to a thesis by **Savisan** (which was quoted in the discussion), in typhoid fever with pregnancy abortion or premature labour takes place in 70 or 80 per cent. The experience made public in the discussion showed that the fear of inducing premature delivery need not deter the practitioner from antipyretic treatment when a patient is pregnant.

## **3. Cholera in pregnancy.**

**Queirel** contributes a memoir on this subject, and **Charpentier** reports upon the memoir to the French Academy of Medicine (*Nouv. Arch. d'Obst. et de Gyn.*, No. 4, 1887). **Queirel** bases his conclusions on 119 cases. They are as follows:—Pregnancy makes the prognosis in cholera graver. Cholera is very fatal to the foetus in utero, but we do not know whether it is transmitted from mother to child. It is a frequent cause of abortion, which does not lessen the danger for the mother, and which is more frequent in the second half of pregnancy. Near term living infants may be born. These infants often succumb to cholera in the first few days of life. Cholera is most serious in the lying-in period, being then almost always fatal. When the attack is very severe, patients may die before they have time to abort. **Queirel** rejects the course which some have advocated—to empty the uterus in cases of cholera. He has not, in the post-mortem examinations he has made, found any cases of the hæmorrhagic endometritis described by **Slaviansky** as occurring in this disease. **Charpentier** approves **Queirel's** conclusions.

## **4. Goitre dependent upon pregnancy.**

**De Soyre** (*Archives de Tocologie*, Jan. 30, 1887) in a study of this subject comes to the following conclusions:—It is not rare to find in women who appear free from any inheritance of it a hypertrophy of the thyroid, occurring either at the establishment of menstruation or in the course of the first or subsequent

pregnancies. This hypertrophy generally remains limited, or diminishes after the pregnancy which has occasioned it, to re-appear, and perhaps increase, in another pregnancy, but otherwise giving no serious trouble, not even in labour. But the thyroid may, instead of remaining stationary, progressively increase in volume, and, by compressing the trachea, cause more or less intense dyspnoea, and even death by suffocation. The need for treatment is urgent when this progressive increase of the disease is going on. The treatment which gives the best results is the interstitial injection of pure tincture of iodine. The existence of pregnancy should not make us refrain from this treatment; because first the pregnancy and then the life of the patient will be compromised if we withhold treatment. But both iodine injections and the induction of premature labour require a certain time to produce an effect, and if we are called to a patient threatened with suffocation, something more rapidly effectual is wanted. In that case laryngotomy and Cæsarean section should be rejected, and the partial removal of the thyroid undertaken—of course with all proper precaution.

### 5. Tetany in pregnancy.

Meinert (*Arch. für Gyn.*, Bd. xxx.) relates a case in which the patient, in two pregnancies out of six, suffered from tetany. In one it began in the second month, and lasted till delivery; in the other it persisted from the fourth month to a fortnight after delivery. During the disease a tapeworm was passed; but this occurrence did not produce any evident effect on the symptoms. At the time the symptoms ceased after the second pregnancy the patient was taking bromide of potassium; but she had taken it before without benefit. Meinert has collected from literature nine cases described as tetany in pregnancy; but critical examination leads him to reject five of them. The ages of the genuine cases range from twenty-one to forty-two. The attacks in the four quoted cases began, one in the fourth, two in the fifth, and one in the sixth month. In one of them the symptoms ceased two days after delivery; in another it followed the extirpation of a goitre, and lasted four weeks only. Information as to duration is wanting in the other cases. Bleeding, in one case, produced temporary improvement, followed by anæmic troubles. The cases go to show that when this disease exists with pregnancy, drug treatment is of uncertain value; but the symptoms may be expected to disappear soon after delivery.

### 6. Diabetes insipidus in pregnancy.

Dr. Matthews Duncan (*Obst. Trans.*, vol. xxix.) quotes two cases of this disease. One was congenital and persistent, unaffected by



pregnancies, of which there were eleven; in the other case the disease was only present during the last four months of pregnancy. He narrates two other cases from his own practice. In one of these there were four pregnancies during the currency of the disease, which did not appear to be affected by them; in the other the symptoms commenced at the end of the fifth month, and disappeared after the lying-in. Diminution of the quantity of urea secreted appears to him to be of great importance in it. Similar cases of greatly-reduced secretion of urea, with feelings of weakness and sickness, Dr. Matthews Duncan has observed in women not pregnant nor recently delivered. It is to be noticed, however, that in one of Dr. Duncan's cases the urea ranged from 417 to 860 grains per day; and in the other, on the days on which the data for estimating the quantity are given, to rather more than 300 grains per day.

### **7. Acute cystitis in pregnancy.**

Dr. Emile Blanc (*Nouv. Arch. d'Obst. et de Gyn.*, No. 4, 1887) describes a case of acute cystitis coming on without discoverable cause at about the middle of pregnancy. Treatment of a gentle kind (rest, hip-baths, sedative or mild astringent vesical injections) was continued for two months without any benefit. The disease was then treated by making, every two or three days, three or four injections into the bladder (previously emptied) of two or three ounces of a 1 in 50 solution of nitrate of silver. Each of these injections was followed by extremely severe vesical pain, which lasted about an hour and a half; and in the first subsequent micturition much membranous *débris* was expelled. From the beginning of this treatment, amelioration took place, notably after the third "intra-vesical cauterisation," as the author styles these injections. After between two and three weeks the urine was almost normal, without albumen, containing only some mucous filaments. There was no pain in micturition, the patient had no longer to rise at night to micturate, and only passed water five or six times daily. The treatment was then changed to an injection, every two days, of a 1 in 200 solution of silver nitrate. A slight relapse occurred two or three days before delivery, but symptoms ceased the second day after delivery, to slightly return when the patient got up; but they were then at once removed by two or three injections of the 1 in 200 solution.

### **8. The vomiting of pregnancy.**

In last year's "Year-Book" mention was made of the treatment of the vomiting of pregnancy by the internal administration of cocain. Bois (*Bull. gen. de Thé.*, No. 11, 1886) publishes a case in which, after cocain and other drugs, given by the mouth,

had failed, the vomiting was stopped by the application of cocain to the neck of the uterus.

Dr. W. A. Duncan (*Lancet*, Oct. 15, 1887) relates three cases treated in a similar way. The vomiting of pregnancy, like many nervous diseases, is apt to be influenced by anything that makes a strong impression on the nervous system. This is illustrated by a case communicated by Chazan (*Centralbl. f. Gyn.*, No. 2, 1887), in which, after the patient had been for a long time treated by medicines without any result, cessation of the vomiting at once followed an examination, made under anæsthesia, in which nothing was done to the uterus, but the patient, after it, imagined that the pregnancy had been terminated. Inferences as to the effect of treatment in these cases can be safely drawn only from a large number of cases.

### 9. Retroversion of the gravid uterus.

Professor A. Pinard and Dr. H. Varnier contribute to the *Annales de Gynécologie* three important papers on this subject. In the first (Nov., 1886) they consider the part played by adhesions in producing this displacement and in preventing its reduction. Their conclusions are, that old *pelvic* adhesions are seldom the cause of retroversion of the gravid uterus or of its irreducibility. The frequency of such adhesions has been exaggerated, and when present during pregnancy they undergo changes which render them more extensible. But old adhesions among the viscera *above the pelvis* may, and do, prevent the upward movement of the gravid uterus, and produce retroversion and incarceration, for they do not undergo any modification in consequence of pregnancy. In the other two papers (Fév. et Mai, 1887) they have collected and critically examined all the recorded cases of "exfoliative" (or, as they prefer to term it, "gangrenous") cystitis—a morbid condition the most common cause of which is retroversion of the gravid uterus, although it may occur after delivery, and, still more rarely, as a result of retention in the male. In retroversion of the gravid uterus, the authors remark, one might almost say, "the uterus is nothing and the bladder everything." Cases apparently like "gangrenous" cystitis have been described, chiefly by German writers, under the title of "pseudo-membranous," "croupous," or "diphtheritic" cystitis. Pinard and Varnier's first conclusion is, that there is not a single case proving the existence of "pseudo-membranous" cystitis with retroversion of the gravid uterus; that in every case in which the membranes have been carefully examined, they consisted either of the mucous coat, the muscular and mucous coat, or the mucous, muscular, and peritoneal coat of the bladder. They find that every intermediate

degree is met with between simple stripping-off of the mucous membrane and perforation or rupture of the bladder; that these are different stages of one and the same malady, "*gangrenous cystitis*." They believe that the special tendency to gangrene in cystitis from retroversion is due to the pressure of the retroverted gravid uterus on the vessels of the bladder—a pressure to which they are exposed from their relations with the bony pelvic wall and their mode of distribution. It is not due to retention, for it may occur without retention. From these pathological conclusions they draw the following rule for treatment: that it is not enough in retroversion of the gravid uterus to relieve retention of urine and wait for spontaneous righting of the uterus. This should only be done when there is no evidence of cystitis. If there be cystitis, the retroversion should be reduced as soon as possible. If this cannot be done by the ordinary means, the choice lies between two courses: (1) to produce abortion, (2) to perform laparotomy. The latter is the only course by which we can clearly ascertain the nature of the difficulty, and, if the uterus be kept down by adhesions, the only way of liberating it. If the uterus is reduced, or abortion provoked, gangrene may yet take place. When gangrene of the vesical wall has occurred, the authors find that the principal cause of a fatal termination is the presence in the bladder of the decomposing membrane, and that the first indication of treatment is to remove the membrane. This is best done by cutting into the bladder from the vagina; after, the fistula should be kept open till the cystitis is completely cured. The indications for operation are plain. When, although all pressure on the urethra has been removed, and in spite of repeated washing out, the urine remains foetid, ammoniacal, containing greyish-brown shreds or *débris*; there is fever, dryness of the tongue, wasting; hæmaturia; and sometimes, although the bladder is full, no fluid flows through the catheter, then it is urgently necessary to act.

#### **10. The pelvic joints in the puerperal state.**

An important paper on this subject, by Dr. Stephen W. Driver, appears in the *Boston Med. and Surg. Journ.* of Sept. 15, 1887. He examined the pubic and sacro-iliac joints in a series of 300 cases, and comes to the following conclusions:—The presence of relaxation of these joints depends very much upon the strength of the bony and ligamentous structure of the skeleton; that is, it is more apt to occur in the woman of poor physique. Age does not determine its presence; at least, the degree of it. It is not constant, but a degree of it is natural at the time of labour, and may exist during pregnancy and even in the early months. There



may be great motion (in the joints), and no lameness or impairment of walking power, notwithstanding that various authors say the contrary. There may be a small degree of motion and great lameness. This **Baudelocque** pointed out. Lameness depends upon a pathological condition of the joints. Pain at the sacro-iliac junction of one side proves that on that side is the pivotal motion of the ilium on the sacrum. It may occur in non-puerperal females, in the sterile, and in virgins. Patients may recover from a most serious condition of lameness without treatment. On the other hand, the most careful treatment may fail in restoring firmness to the pelvis. Many a case of lingering disability to walk after delivery, with what the doctor considers vague complaints, may have been due to this cause; and it is well, when you cannot find out what is the matter, to test the condition of the pelvic ligaments. A small degree of relaxation or separation may facilitate delivery, and may be the factor that saves the use of forceps. The author shows that a slight separation of the symphysis pubis may make possible a "pivotal motion" of the innominate bone on the sacrum, which separates the ischial tuberosities, and so widens the pelvic outlet. One-twentieth of an inch separation at the pubis may increase the distance between the ischial tuberosities by one-third of an inch. To test the joint, the patient should lie on her back; the finger is then placed within the vulva, the pubic junction resting on the first joint or phalanx. The patient is then told to draw up first one leg, then the other. When one leg is drawn up, the corresponding pubic ramus is depressed. The slightest motion can thus be easily perceived. The treatment consists in a strong band of twilled cotton, five inches wide, fastened as tightly as possible round the hips, and prevented from slipping up by perineal straps.

### **11. Premature labour.**

**Dr. R. Koppe**, of Moscow, advocates the induction of premature labour in cases of inevitably fatal disease as a substitute for post-mortem Cæsarean section. He relates a case of tubercular laryngitis in which he induced labour for this reason; and mentions another of aortic aneurism. The method adopted was a new one, viz., the separation of the membranes by the finger from the lower segment of the uterus. This allows the membranous bag to advance, and the lower uterine segment to retract; and the pressure of the advancing bag of membranes upon the cervix excites uterine action.

### **12. The manual correction of occipito-posterior positions.**

**M. Emile Blanc** (*Lyon Médical*, Nos. 3, 4, and 6, 1887) reviews

the means of rectifying those difficult occipito-posterior presentations in which rotation forward of the occiput does not take place. The lever has found little favour. Rotation of the head with forceps, the means which, since Smellie recommended it, has been mostly preferred, brings with it danger of laceration of the vagina, or the cervix uteri, and possibly even of the bladder. Manual correction may be effected with the fingers only. To this, if done with proper precaution, there is no possible objection; if always effectual, it would be a perfect procedure; but it often fails. M. Blanc has only succeeded in this way in about one case out of three, and those were cases in which the head was small and the pelvis large, or uterine inertia was present. Something more is needed. The best means is the introduction of the whole hand, as recommended by Parry in 1876. One hand (right or left, according to the position of the patient and of the fœtus) should be introduced into the vagina, the head raised, so as to disengage its greatest diameter, and then the occiput turned forwards. With the other hand the uterus is supported externally, and rotation assisted by pressure on the body of the child. In order to maintain the improved position the forceps may then be applied and delivery effected.

[I have practised and taught this manœuvre for some years as being the best way of delivering difficult occipito-posterior presentations. It was recommended by Ramsbotham, but has fallen out of notice in the more recent English text-books. In several cases, after prolonged and vigorous attempts at forceps-delivery (on the principle that extraction is the business of the accoucheur, rotation that of Nature) had been ineffectual, I have been able, after turning the occiput forward with the hand, to deliver easily and quickly. In most cases, when the occiput is turned forwards, it will stay there; in some it turns back again directly the hand is removed. I believe the difference depends upon the degree to which the body turns with the head. In the latter case, the head must be grasped with forceps while it is held in its new position.]

### **13. Interference in face presentations.**

De Soyre (*Archives de Toccol.*, Mars 15 and 30, 1887) discusses this subject, basing his remarks on statistics contained in a thesis by Dr. Boisleux. He comes to the conclusion that one great cause of failure in operations for delivery in face presentations is too early interference. Early interference may be called for in cases of uterine inertia, on account of slowing or irregularity of the fœtal heart, serious hæmorrhage, or eclampsia (?). We should not interfere unless the os uteri is dilated or dilatable. The kind of intervention depends upon the degree of advancement of the

labour. If the head is not engaged in the pelvic inlet, podalic version should be performed. If it has entered the pelvic inlet, and, still more, if it has descended into the cavity, we should resort to forceps; and if the head have well descended, usually nothing will be more easy than to effect rotation of the chin forward in mento-posterior positions. Pelvic deformity does not contra-indicate these conclusions, if there be not too marked disproportion between the probable size of the child and that of the pelvis.

[Rotation with the hand I have found as useful here as in occipito-posterior positions. It also was recommended by Ramsbotham.]

#### 14. Brow presentations.

M. Emile Blanc (*Nouvelles Arch. d'Obst. et de Gyn.*, Nos. 8, 9, and 10, 1886), in a memoir containing a full account of the bibliography of this subject, comes to the following conclusions as to treatment:—Should delivery be left to Nature? In cases so treated the foetal mortality is at least 1 in 5. Expectant treatment should, therefore, be absolutely rejected, unless, before or immediately after rupture of the membranes, there be a marked tendency for the presentation to change into one of vertex or face. The chances of the child are greatly improved by manual correction of the malpresentation. (1) When the head is above the brim, having regard to the greater foetal mortality which attends face presentations, we should attempt to bring down the occiput, more especially in cases in which the face looks backwards. But if there be a tendency towards spontaneous alteration into a face presentation *with the chin forwards*, this should be respected and assisted. (2) When the head is in the pelvic cavity, it is easier to bring down the chin; and, therefore, this should be preferred, unless the pelvis be so large and the head so small that the occiput can be easily brought down. Alteration of the position of the head should be attempted first by pressing upward on the part which we wish to raise; if this fail, the patient should be anæsthetised, the hand introduced, the head pushed up, and the fingers passed over the part which it is desirable to bring down. When attempts at manual correction fail, the lever may be used. This instrument is much better suited to bring down the occiput than the face; but it should be used to try and bring down the face before we conclude that craniotomy is necessary. In cases of slight pelvic contraction the lever has this advantage over the forceps, that it leaves the head free to accommodate itself to the pelvic diameters. It is especially suitable when the head is at the brim, much less so when it is in the pelvic cavity. The lever



may also be used to rotate the head. If the lever fail, turning, forceps, and craniotomy are the only resources left.

### **15. External pressure during labour over the sacro-sciatic foramen.**

Dr. A. F. A. King (*Amer. Journ. of Obst.*, May, 1887) has made experiments on the dead subject on the effect of external pressure on the sacro-sciatic foramen. By such pressure he finds a bulging into the pelvic cavity at the point pressed on can easily be produced, and the head, placed in the pelvic cavity, can be made to rotate. He suggests that in difficult labour in which the occiput or the chin, as the case may be, fails to rotate under the pubis, pressure made in this way may be utilised to effect or assist the necessary rotation.

### **16. Dystocia from dorsal displacement of the arm.**

Dr. A. H. F. Barbour (*Edin. Med. Journ.*, Sept., 1887) relates a case of labour with dorsal displacement of the arm. The head was transverse and incompletely extended; it was extracted by forceps with great difficulty. Then came still greater difficulty in getting the shoulders through: the cause of the difficulty, not recognised at first, being that one arm was thrown over the shoulder, lying along the back. Attempts were made to slide it down, but eventually it was broken, and after about an hour the child was delivered dead. The case illustrates not only the obstruction which this displacement causes in labour, but also the difficulty of diagnosis and treatment; for the cause of delay was not made out at first, although the patient was thoroughly examined by so able an obstetrician as Dr. Barbour. This case and Prof. A. R. Simpson's, to which Barbour refers, show that the diagnosis can only be made by introducing the whole hand and feeling above the head. Barbour remarks on the difficulty of explaining the extension of the head. (Was it a case that tended to become a face presentation, but in which complete extension was prevented by the position of the arm?)

### **17. External version in breech presentations.**

The value of this proceeding was the subject of discussion at the Obstetrical and Gynæcological Society of Paris in November last (*Nouv. Arch. d'Obst. et de Gyn.*, No. 1, 1887). It was introduced by Prof. Pajot. He finally summarises his views as follows: "Version by external manipulation in breech presentations may be attempted. It may be useful, especially in primiparæ, but it is in them difficult, and may be dangerous: violence must not be used. In multiparæ it is easier, but less necessary." These propositions were put to the vote, and carried unanimously. The opinion of most speakers seemed to be that external version was only likely

to succeed in the hands of an accoucheur of considerable experience and knowledge.

### **18. Should there be an interval between turning and delivery?**

Dohrn (*Zeitsch. für Geb. und Gyn.*, Bd. xiv.) comments upon a paper by Winter (*ibid.*, Bd. xii.), in which the latter urged that the commonly-accepted teaching was faulty, in that it assumed the prognosis to be the same in foot presentations artificially produced as in those occurring from natural causes, and in that it held version to be increased in difficulty by waiting till the os uteri was fully dilated. Winter asserts that if we wait for full dilatation, turning is not made more difficult; that the conditions which make it difficult do not arise until the expulsive stage is reached; while if we turn early, and wait for full dilatation before extracting, the child incurs much danger. We ought to keep the membranes entire until the os uteri is fully dilated, and then turn and deliver without delay. If the membranes rupture early, turning still is better postponed till it can be immediately followed by delivery. Dohrn remarks upon this, that although the teaching of the schools is as Winter says, yet he believes most practising accoucheurs do not follow it, but make of version and delivery one operation. He agrees with Winter in thinking that version should not be done until the os uteri is fully dilated, so that delivery may quickly follow. But he does not agree with him in thinking that the best results for the children are attained by immediate extraction after version. He would turn, and then leave the case to Nature. His objections to immediate extraction are mainly these: (1) that if the passages are fully dilated and the uterus acting well, when the child is turned, delivery follows very soon; (2) that harm may be done by unskilful extraction. (The difference is verbal rather than real, for while Winter would think the accoucheur should know how to extract, and would deprecate unnecessary force or haste, Dohrn would probably advise extraction if the natural forces were not equal to quick expulsion.)

### **19. How can the accoucheur best guard the perineum while the foetal head is passing?**

Dr. D. Berry Hart (*Edin. Med. Journ.*, April, 1887) thus answers the above question. He denies that the head is extended while it is passing the perineum. The common description of "extension" of the head, as the fourth movement in the mechanism of labour, is misleading. Extension implies fixation of the occiput and descent of the sinciput. To avoid tear of the perineum, it is necessary to prevent descent of the sinciput. This is best done

by pressing on the perineum in the direction of the pelvic outlet, and so hindering descent of the sinciput. When the occiput is beginning to pass under the pubic arch (the thumb pressing on the perineum as described), the fingers should be placed between the head and the pubic arch, so that when the occiput has cleared the arch the fingers are passed towards the nape of the neck, the thumb lying over the sagittal suture. This gives complete command over the head.

[For the head to pass with the least possible stretching of the perineum, it seems to me essential that the nape of the neck and occiput should as closely as possible hug the symphysis pubis; and I do not see how this can be done without extension. Does not effectual protection of the perineum consist in this: in securing (1) the least possible stretching, (2) that that stretching shall not be sudden?]

## **20. "Ritgen's manœuvre" for perineal support.**

Fehling (*Centralblatt für Gyn.*, Nr. 5, 1887) recalls attention to a method of perineal support recommended by Ritgen thirty years ago. While the head is distending the perineum, four fingers of the left hand are applied between the tip of the coccyx and the anus. In this position the brow, the upper or lower maxilla can be easily felt. By pressure at the end of a pain the recession of the head is hindered, and the head may even be advanced when pain is absent. This pressure also keeps the occiput close to the pubic arch, and if the head have not rotated into the antero-posterior diameter, its rotation can be assisted. Fehling has used this manœuvre in many cases of recent years, and seen no disadvantage from it. It is especially useful where rapid delivery is needed, such as cases in which the foetal heart-sounds are slackening, where there is hæmorrhage, or the mother is exhausted.

## **21. The improved Cæsarean section.**

In a paper by Credé (*Arch. für Gyn.*, Bd. xxx.) he gives a statistical account of all the cases of Cæsarean section performed according to the improved method of Sanger (see "Year-Book," 1886) that had been performed up to April 15, 1887. They then amounted to 50. Of these, 36 mothers recovered, or 72 per cent. Forty-six of the children were born alive, or 92 per cent. Of the 14 fatal cases, 10 died from septicæmia, 1 from hæmorrhage, and in three death was attributed to diseases existing at the time of operation.

## **22. The mechanism and management of the third stage of labour.**

Champneys has contributed to the *Obstetrical Transactions* (vol. xxix.) a series of papers on the mechanism, and some points in



the management, of the third stage of labour. He gives a full *résumé* of the literature of the subject, and a series of observations on the mode of expulsion of the placenta. These lead him to the conclusion that a certain amount of hæmorrhage is a normal part of the third stage of labour. The average amount of blood lost before the expulsion of the placenta is about six ounces ; and that with the placenta, or in the membranes, about six ounces more. The placenta presents, in the great majority of cases, by a point on the amniotic surface, and this point is almost invariably near the lower edge of the placenta, but varies with the position of the placenta : the higher the placenta, the higher being the presenting point, and *vice versâ*. A certain amount of inversion of the lower edge of the placenta, therefore, occurs ; and (for in none of the cases was the cord pulled upon) this inversion is part of the natural mechanism, and is not due to traction. Complete inversion of the placenta, with central presentation at the os uteri, is very rare. The author believes that, in addition to reduction of the area of the placental site by uterine contraction and retraction, some escape of blood probably plays a part in the ordinary mechanism of placental detachment ; and that the slight inversion of the placenta which takes place is probably due to this cause. The separation and expulsion of the membranes take place as follows :—By the uterine contraction and retraction during the premonitory and first stage of labour, the lower uterine segment is drawn up over the lower pole of the ovum, causing a detachment of the ovum from the uterine wall : this detachment proceeding, to a varying distance, from the os internum upwards, according to the amount of retraction reached before the bursting of the bag of membranes. This process requires the maintenance of the bag of membranes. The process is carried further by wrinkling, and partial separation of the membranes by diminution of the internal surface of the uterus. Little advance is made in this manner until the uterine cavity is considerably diminished ; that is, until not only the waters have escaped, but labour has considerably advanced. The process is completed by peeling-off of the membranes by the traction of the descending placenta. The separation of the membranes from the uterus takes place in the “plane of least resistance ;” and this plane, in a normal state of things, is the ampullary layer of the decidua. Supposing this layer to be rendered tough by inflammation or other disease, the “plane of least resistance,” along which separation will take place, will be altered, and will generally be between the chorion and amnion. It follows, from this description of the mechanism, that rupture of the membranes at the proper time is

an essential part of the proper mechanism. Supposing rupture of the membranes to take place too soon, the process of separation by retraction is interfered with, and the chorion will remain unduly adherent to the lower uterine segment. Supposing it to take place too late, the loosening of the connection between the ovum and uterine wall, dependent upon wrinkling, is delayed; as the bag of membranes advances, the chorion, which is less tough than the amnion, gives way, and the amnion advances alone. The proper time for rupture is when the os is from three to three and a half inches in diameter. From this description of the mechanism the following practical conclusions follow:—The membranes should generally be preserved till the os uteri is fully dilated; after this they are not only (in ordinary cases) useless, but the persistence of the amnion favours retention of membranes. They should, therefore, be ruptured when the os is fully dilated. In vertex cases, if the head has settled over the os uteri, the advance of a smooth sausage-shaped protrusion of membrane points to advance of amnion alone, which favours retention of chorion. Separation of the two membranes not only points to adhesion of chorion, but renders its subsequent removal more difficult. Lastly, this axiom may be formulated: “When the membranes advance low in a vertex case, look out for retention of the chorion.”

In a further paper Dr. Champneys examines a dictum of Levret's, which is quoted as a fact in some recent text-books, to this effect: “That the insertion of the umbilical cord into the placenta varies, as the insertion of the placenta in the uterine wall; being central if the placenta is central, but if the placenta be not central, then the cord is inserted nearer the edge which approaches the os uteri.” No evidence has ever been adduced in support of this, and Champneys now shows that it is not in accordance with fact.

Auvard (*Edin. Med. Journ.*, Aug., 1887), in a paper written before the publication of the contributions by Champneys, which we have summarised, describes a case which illustrates that author's view of the effect of too late rupture of the membranes. The protruding membranes formed a tumour at the vulva as big as a small apple; it was ruptured, and the labour finished spontaneously. On examining the membranes, the amnion was found completely detached from the chorion throughout its whole extent. The author suggests that by rupturing with the finger-nail the chorion alone, the advance of the amnion into the cervical canal may be favoured, and that this may be useful in checking hæmorrhage from placenta prævia.

### 23. The treatment of retained chorion.

Dr. M. Reihlen (*Arch. für Gyn.*, Bd. xxxi.), after quoting from various writers to show what contrary opinions have been put forth as to the proper treatment when a bit of chorion is retained, considers the question, using as a basis the records of the Stuttgart Lying-in Charity, comprising 3,534 labours. As to frequency, he finds it occurs in about 5 per cent. of labours. It is especially apt to happen, without any fault of the accoucheur, in cases of marginate placenta. The insertion of the chorion on to a marginate placenta is a place of least resistance where it easily tears. Retention of chorion is best prevented by careful expression of the placenta after the method of Credé (see also Champneys, *supra*). It makes very little difference whether the bit retained be large or small. If, when chorion is retained, post partum hæmorrhage occur, the bit must be removed; if not, treatment should be expectant. If secondary post partum hæmorrhage take place (which happened in about 8 per cent. of the cases on which Reihlen's paper is based), it should be treated with ice and ergotin. If there be fever (present in more than 40 per cent.) vaginal antiseptic injections of 3 per cent. carbolic solution should be used; and if this is not followed by improvement, the uterus should be washed out once or twice. Reihlen finds that cases thus treated did better than those in which the retained chorion was removed subsequently to the time of labour, and therefore he advises against such removal.

### 24. The treatment of retention of placenta.

Professor Pajot in a clinical lecture (*Annales de Gynécologie*, Nov., 1886) advises practice which many will think is, or ought to be, obsolete. He does not approve of expression of the placenta, but tells his pupils to deliver by pulling at the cord. If the cord breaks, expression may be tried; and if that fails, then manual removal. Ergot should never be given; it brings about such "retraction" that the placenta cannot get out nor the hand get in. Cases of retention after abortion may be divided into two classes—one common, in which the placenta is detached; the other rare, in which it is adherent. When detached, the danger is from putrefaction; when adherent, from hæmorrhage. In either case the treatment should at first be expectant. Fœtor of discharge in the one case, hæmorrhage in the other, is the signal of danger and the indication for interference. If the placenta be detached and decomposing, remove it; if attached and causing hæmorrhage, plug, and wait for its detachment.

[Is it not better, when once it is certain that the pregnancy has come to an end, to prevent either putrefaction or



hæmorrhage by removing the placenta with as little delay as possible ?]

## **25. The treatment of retention of placenta after abortion.**

Dr. P. Budin (*Progrès Médical*, Nov. 27, 1886) discusses this question. After referring to different methods of interference that have been advised, he says that before these methods can be accepted it must be shown (1) that retention of the placenta is really a source of frequent danger, (2) that the digital and instrumental manœuvres which are resorted to are free from risk. In answer to the first question he adduces statistics from La Charité and La Maternité, comprising 210 abortions, in 46 of which retention of placenta occurred. Of the 46, in only two was there much hæmorrhage, and in only six did febrile symptoms occur, two of them being feverish when admitted. The manœuvres for extraction of placenta, he thinks, are dangerous, and quotes the cautions which those who recommend them give. His final conclusion is that the expectant method, which *was* good, is now excellent, thanks to vaginal and uterine antisepsis. Hæmorrhage must be stopped by plugging with wadding or charpie previously rendered aseptic, and febrile symptoms by syringing the vagina; and if that be ineffective, washing out the uterus with antiseptic solutions, either sublimate, 1 in 2,000 or 3,000, or carbolic acid, 2 or 3 per cent.

## **26. "Écouvillonnage," or brushing out, the uterus.**

Misrachi (*Nouv. Arch. d'Obst. et de Gyn.*) in several long papers on retention of the placenta after abortion, opposes the views of Budin (given above). He recommends dilating the cervix uteri with sponge or laminaria tents previously carefully rendered aseptic, then pulling down the uterus with the volsella, extracting with forceps any large pieces of placenta that the uterus may contain, and then, if there be no large pieces in the uterus, brushing out the cavity with the "écouvillon" of Doléris. The "écouvillon" is a brush something like that used for cleansing the india-rubber tubes of infants' feeding bottles, but somewhat larger. Before use it should be dipped in glycerine of carbolic acid.

## **27. Plugging the uterus in post partum hæmorrhage.**

Dr. A. Dührssen (*Centralblatt für Gyn.*, No. 35, 1887) advocates as a last resort in the treatment of post partum hæmorrhage, plugging the uterine cavity with iodoform gauze. He used this treatment first for hæmorrhage from uterine cancer. Its success in that disease led him to apply it first to hæmorrhage

after abortion, and then to hæmorrhage after labour. The treatment of atony of the uterus after expulsion of the placenta that he recommends is as follows : “ (1) emptying the bladder, (2) ergot, (3) kneading the uterus, (4) irrigation of uterus with hot or iced water, (5) plugging the uterus with iodoform gauze.” This is done as follows : Dührssen carries in his obstetric bag a tin case containing several rolls, each of 4 strips of iodoform gauze, with iodoform powder adhering, about 3 metres long, and of the breadth of the hand. The uterus is pulled down by volsellæ inserted as high as possible into the anterior lip ; then with a long pair of forceps the end of one of the strips is seized and pushed up to the fundus of the uterus, which is pressed down upon the forceps by the other hand externally ; then the strip of gauze is seized lower down, and that part carried up, and so on, till the uterus is filled with the gauze arranged in a fan-like fashion. Dührssen says it is astonishing how soon the uterus is completely filled. When filled, it firmly contracts upon the gauze. Unless it expels its foreign contents, it does not again relax, and no further hæmorrhage takes place ; indeed, the patients complain of the after-pains. It is well, after the uterus has been filled, to plug also the fundus of the vagina. One strip of gauze commonly is enough to fill the uterus and partly plug the vagina. The gauze is removed next day, when there are seldom any large clots adherent to it, and the uterus is syringed out, the water usually coming away clear. The iodoform prevents septic poisoning. Dührssen thinks this method of treatment safer and more certain than plugging with wool soaked in perchloride of iron solution, or injecting the iron solution.

## **28. The intra-peritoneal injection of a saline solution.**

Rutgers, of Rotterdam (*Nouvelles Archives d'Obst. et de Gyn.*, No. 8, 1887), in a case of collapse from post partum hæmorrhage, all other treatment having proved ineffective, injected into the peritoneal cavity half a litre (about 17 ozs.) of a warm solution of sea salt. In a few minutes the pulse revived, warmth returned, and the patient rapidly recovered. (For some historical information on this practice, see Dr. B. W. Richardson's “*Asclepiad*,” part iii., 1887.)

## **29. Enucleation of submucous fibroids immediately after delivery.**

Dr. B. Urwitsch (*Centralblatt für Gyn.*, No. 31, 1887) relates a case in which, called on account of post partum hæmorrhage, and arriving about an hour after delivery, he found a tumour projecting into the uterine cavity, and the placenta attached to this

tumour. He removed the placenta, and then enucleated the tumour, which weighed  $\frac{3}{4}$  lb. The patient did well. He has collected from different writers seven other cases, in which the same practice was adopted, and in all with a successful result. His cases show not only that enucleation in these circumstances is a thing that may be done, but that it is a practice from which a good result usually follows.

### **30. The risks of corrosive sublimate douching in lying-in women.**

The efficiency of corrosive sublimate as an antiseptic in midwifery is now so well established that it has been largely used, and therefore the frequency, character, and treatment of the bad results arising from it assume importance. Dr. W. R. Dakin, in a valuable paper published in vol. xxviii. of the *Obst. Soc. Trans.*, has collected from other sources eleven cases of death from the use of sublimate in lying-in women. Out of 170 deliveries under his own observation, in which sublimate was the antiseptic used, there were fourteen cases of mercurial poisoning. The date of the symptoms, in every case, was not earlier than the fourth day nor later than the seventh. The first symptom was diarrhœa. Dakin therefore concludes that "during the use of sublimate douches any diarrhœa which cannot be accounted for in another way should be considered a sufficient cause for the suspension of the drug." The diarrhœa was not accompanied with abdominal tenderness. There was thirst, loss of appetite, fœtor of breath, tenderness of mouth and gums, a red line on gums (distinct and differentiated, not diffused like that which results from defective cleanliness), and the tongue showed a well-contrasted red and white appearance, due to thickening of epithelium and its detachment in irregular spaces. These were constant symptoms. Vomiting, salivation, ulcers on the cheek, hæmorrhage from gums, loosening of the teeth, slightly dysenteric stools, were present in some. In most a trace of albumen was present in the urine, but this was a late symptom. One case was fatal out of the fourteen. The author attributes this result to his not being familiar with the symptoms, and therefore not prepared for them, in consequence of which the mercury was continued for two days after the commencement of symptoms. The case was treated with tinct. opii, of which ʒss. was given daily for four days. He believes that the cause of death was "an accumulation of opium, owing to defect in the means of elimination, viz., the kidneys." He remarks that the treatment of these cases abroad seems to consist in giving opium, and that some of the fatal cases recorded died in much the same way as his own, viz., with fairly-marked



symptoms of opium-poisoning. If the cases are carefully watched, the first symptoms observed, and the mercury at once left off, there is little need of treatment. If treatment be called for, bismuth is quite satisfactory in its action. Opium is never required, and in these cases is a most dangerous drug. As to prevention, he finds that in all the cases of poisoning, a solution of 1 in 2,000 was used. In the cases under his care, in which no stronger solution than 1 in 4,000 was employed, no case of poisoning occurred. He thinks a solution of the latter strength used twice daily is sufficient. It is very important to secure complete emptying of the cavities after irrigation. He regards idiosyncrasy as the most powerful determining cause whether a patient shall be affected or not. His observations do not show that anæmia or albuminuria make patients specially susceptible, nor does the amount of laceration of the genital canal.

In the discussion upon this paper, Dr. Boxall said that out of 345 cases under his care, there had been thirteen cases of mercurial poisoning, all very slight, none fatal.

Dolérís and L. Butte (*Nouv. Arch. d'Obst. et de Gyn.*, No. 12, 1886) relate an experimental investigation made on animals into the effects of irrigating mucous surfaces and wounds with sublimate solution. Their results from experiment agree with those of Dakin from clinical work. The symptoms of poisoning are sanguinolent diarrhœa, vomiting, albuminuria, increasing prostration. The lesions found post-mortem chiefly affect the large intestine and the kidneys. There is an excess of urea in the blood—a sign of renal insufficiency, which shows that it is the kidney-change that plays the chief part in bringing about a fatal termination after irrigation.

Szabo (*Arch. für Gyn.*, Bd. xxx.) gives an account of the results of the use of sublimate in the lying-in hospital of Buda-Pesth. Out of 2,629 lying-in women, the uterine cavity was washed out, after labour or during the lying-in, with sublimate in 263. In ten of these symptoms of poisoning occurred. Of 269 cases in which the vagina only, not the uterus, was washed out, there was only one case of poisoning. Szabo thinks that sublimate should not be used in cases of anæmia, phthisis, or other cachexia, kidney disease, or disease of the alimentary canal. In this clinic the physician of the day, without whose permission no examination is made, teaches students the "obstetrical washing of hands," inspects the hands when washed, and, if necessary, orders the washing to be repeated.

In the Liège Maternity sublimate has been the antiseptic used for the last three years, with the result that there has been

no septicæmia; and there have been no cases of mercurial poisoning in which the symptoms were severe enough to be important. The director, Dr. N. Charles (*Journal des Accouchements de Liège*, Nos. 1 and 12, 1887), attributes this immunity from bad results to the precaution taken to examine each day, morning and evening, the gums of each patient. If a red line appears, the sublimate is at once replaced by carbolic acid.

### **31. Defective sanitation as a cause of puerperal disease.**

Dr. W. S. Playfair (*Lancet*, Feb. 5, 1887) expresses his belief that septicæmia in childbirth may result from poisoning by sewer gas. He relates, in support of this view, four cases, in each of which symptoms of puerperal septicæmia were present, and serious defects in the sanitary arrangements were found. No other cause for the disease could be ascertained; and in three cases out of the four, as soon as the patient was removed from the stream of sewer gas, her symptoms rapidly abated. The author states that he has seen many similar cases.

### **32. The general treatment of puerperal septicæmia.**

Runge (*Arch. f. Gyn.*, Bd. xxx.) advocates the largest possible doses of alcohol, tepid baths, abundant feeding, and avoidance of antipyretic drugs; the principle of this treatment being to maintain the patient's resisting power against the poison. Alcohol prevents heart-failure, and so renders the bath treatment possible without risk; and it lessens the nitrogenous waste. When vomiting is not present, alcohol is well borne. Runge does not recommend the baths on account of their influence in reducing temperature, but for their effect on the general well-being of the patient. They increase appetite, even awaken appetite where there has been repulsion to food, and thus enable the patient to take more food; they procure sleep, and favourably influence circulation and respiration. The temperature of the bath should be from 70° to 75° F., and the patient may be kept in it from five to ten minutes, according to her strength. After each bath the patient almost always feels better. One or two baths may be given daily, according to the symptoms. Before and after each bath a dose of alcohol should be given. The worst cases are those in which vomiting occurs, because in them food cannot be kept down, nor alcohol tolerated, and the baths do not do good.

### **33. The indications for, and the method of, washing out the puerperal uterus.**

This subject is discussed by Dr. Halliday Croom (*Edin. Med. Journ.*, May, 1887). He advises washing out the uterus in cases



where there is pyrexia with foetid discharge, retained placenta, membranes, or clot ; septicæmic symptoms ; after birth of a putrid foetus ; curetting ; or introduction of the hand into the uterus. He holds that all first washings-out should be performed under chloroform. Free exit must be maintained for the fluid, a grooved glass tube being used. It is essential that the fundus uteri be grasped by an assistant in such a manner that the thumb and middle finger compress each Fallopian tube. The only two antiseptics sufficiently reliable are carbolic acid and corrosive sublimate. The latter is more to be depended on. It should not be used stronger than 1 in 4,000 or 5,000, and not in cases of anæmia or kidney disease.

[Is not compression of the Fallopian tubes by the thumb and middle finger, acting through the abdominal walls, rather difficult and uncertain ? If free exit through the cervical canal be maintained, the fluid will not run along the Fallopian tubes unless they are abnormally patent, a condition which is rare, especially after delivery. I have never found chloroform necessary.]

#### **34. Galactorrhœa.**

**Dr. R. A. Gibbons** communicated to the Obstetrical Society of London (*Trans.*, vol. xxix.) a remarkable case of unilateral galactorrhœa. The patient suckled her child for four months. When it was weaned, the right breast ceased to secrete, while the left continued to pour out milk for eleven months after delivery. The milk during this time was natural in quality, and in quantity not more than usual during lactation. The galactorrhœa ceased when menstruation returned. No uterine or ovarian disease could be discovered. Arsenic, iron, strychnia, rest, dry diet, iodide of potassium in small and large doses, belladonna, bromide of potassium, compression of the nipple (so as to prevent the outflow of milk), quinine in large doses, opium, galvanism, and faradism, were all tried, but none had any appreciable effect in lessening the secretion. The author quoted cases in which galactorrhœa, unaffected by drugs, had ceased when pregnancy occurred ; and in which it had been cured by the use of a vaginal douche to provoke menstruation, the mammary secretion having ceased when menstruation appeared. In the discussion which followed, **Mr. Bland Sutton** related cases in which galactorrhœa was observed in cows suffering from bovine tuberculosis affecting the ovaries, and in a goat with cystic ovaries ; and **Dr. Champneys** mentioned that in cows lactation had been prolonged by spaying them. The general tendency, both of paper and discussion, was to show the close dependence of healthy lactation upon the general health, and upon the healthy functional activity of the generative organs as a whole, and the comparative powerlessness of mere drug treatment,



# DISEASES OF THE SKIN.

BY MALCOLM MORRIS, F.R.C.S.E.,

Surgeon to the Skin Department at St. Mary's Hospital, London.

---

## 1. The treatment of erysipelas.

**Classen** (*Centralbl. f. Chirurg.*, No. 19, 1887) recommends the treatment of erysipelas by incision, as practised by **Kraske**. Crossed incisions are made into the affected part, so that no bridge of healthy skin is left as a path by which the inflammation may spread. It is suggested that, though the author has only tried the method in superficial erysipelas, it may be of use when the deeper parts are attacked.

**Ducrey** (*Riforma. Med.*, No. 36, 1887), writing from the *clinique* of Prof. de Amicis, in Naples, reports most favourable results from the treatment of erysipelas by injections and outward applications of corrosive sublimate. A solution of 0·1 per cent. is injected into the parts a few millimetres from the edge of the erysipelas, and in spots about 3 cm. removed from one another. A piece of wool, dipped in 1 per cent. solution, is placed over the part, and the result is a crop of blisters over the whole of the affected surface, and the cure of the erysipelas. The blisters subside when treated with boracic-acid ointment or oil and lime-water.

**Sir Dyce Duckworth** (*Practitioner*, p. 1, Jan., 1887) recommends in the treatment of erysipelas an ointment composed of prepared or precipitated chalk and benzoated or purified lard. Either the *creta preparata* or the *calcii carbonas. præcipitata* of the *pharmacopœia* may be used. A large amount of chalk should be incorporated in the ointment, so as to secure suitable consistency. The best proportions are equal parts of chalk and lard, the lard being previously melted, and half a drachm of pure carbolic acid may be added to each ounce of the ointment. The application of the chalk ointment is cleanly, non-irritating, cooling, and soothing. In severe cases the ointment may be re-applied twice, or oftener, every twenty-four hours.

**Dr. Nussbaum** (*Allg. Wiener med. Zeitung*, No. 1, 1887) advises the employment of ichthyol in the treatment of erysipelas migrans. It is applied in the form of an ointment composed of ichthyol and vaseline in equal parts. This is applied over the spreading margin. The part is then covered with a 10 per cent. salicylate wadding. The measure has been tried in five cases, with uniformly good results.

Sufficient evidence is not yet forthcoming to enable an opinion to be formed as to the value of this drug.

The great majority of the recent specifics for erysipelas have not stood the test of time, and it is apt to be forgotten that a fair percentage of cases of spreading erysipelas get well readily under the simplest conditions of treatment.

## **2. The treatment of eczema uterinum.**

**Bohn** (*Deutsch. Archiv. f. klin. Med.*, Bd. xxxix., 1886 ; see *Med. Chronicle*, vol. vi. p. 171) draws attention to a variety of eczema which has been casually noticed by Rayer, Hebra, and others, but which is certainly far from uncommon. It occurs about the time of the climacterium, generally after the flow has ceased, and is very prone to relapse. In form it is squamous and oozing, not suppurating. Its localisation is almost invariably confined to the region of the scalp and ears, sometimes projecting slightly on to the face. Occasionally it begins on the fingers and hands, but thence generally "springs" to the head. The body is never affected. As with chloasma, pruritus, acne simplex, and rosacea, its connection with the functions of the female genital organs is undoubted ; but the chain of causation, as is the case with all the other symptoms of the climacteric period, is still imperfectly understood. The treatment is, notwithstanding, most satisfactory : arsenic internally, and ammoniated mercury ointment externally, act like specifics.

**Dr. Brooke**, whose abstract of the above article I quote, believes that Bohn is somewhat too dogmatic in his localisation of the disorder. He is of opinion that the climacteric variety of *eczema uterinum* is more frequent on the extremities and neck than the scalp, and that it may be either oozing or squamous. In this opinion I entirely agree.

## **3. The treatment of eczema.**

**Lassar** (*Berl. klin. Wochenschr.*, Sept., 1886) insists upon cleanliness in the treatment of eczema, and, contrary to the ordinarily-accepted notions, counsels the non-avoidance of water in acute eczema. He places his patient in a bath at a temperature of 82° F., and cleans the affected skin thoroughly by rubbing with soap. The patient remains in the bath for from 20 minutes

to 2 hours, and is then dried and the affected parts covered with the following paste :—

R	Zinci oxydi	...	...	...	...	...	...	31.
	Amyli...	...	...	...	...	...	...	34.
	Vasellini puri vel lanolini puriss.	...	...	...	...	...	...	34.
	Acidi salicylic.	...	...	...	...	...	...	32.
								gr. 9.

To which a sedative or anodyne may be added if necessary. The whole of the affected part is covered by absorbent wadding maintained in place by a small bandage, the dressing being allowed to lie for several days. Lassar also enunciates a somewhat startling innovation in the treatment of acute eczema, which he has found to be successful. He applies while the patient is in the bath the following tar preparation,

R	Ol. fagi	...	...	...	...	50 parts.
	Ol. rusci	...	...	...	...	50 „
	Sp. vini diluti	...	...	...	...	25 „

and thoroughly removes it again with soap before the patient leaves the bath.

**Martin**, of Madgeburg (*Deut. med. Wochenschr.*, No. 52, 1886), has had excellent results from the above treatment, and insists that the applications should always be made by the physician. He recommends a similar treatment for ulcerated legs. The ulcer is to be washed with a weak silver solution, and powdered with talc, the remaining portions of the limb being well cleansed with a weak sublimate or carbolic lotion. The paste above mentioned is then applied over the whole of the inflamed surface (from the edges of the ulcer outwards), and over this is placed the absorbent wadding and small bandage as before.

The bold treatment advocated by Lassar should not be attempted without explanation to the patient. I have tried the method in a few cases, but have invariably seen bad results from it.

#### 4. The treatment of eczema by pastes.

**Martin** (*Deutsch. med. Wochenschr.*, No. 52, 1886), writing from Lassar's Private Clinique, describes the results obtained by treating acute eczema with a salicylic paste, as practised in that institution. The paste is composed as follows :—

R	Acid. salicyl.	...	...	...	...	2 parts
	Amyli	}	...	...	...	āā 24 „
	Zinci oxyd.					
	Vaselin. or lanol. puriss.	...	...	...	...	50 „



As the patients were forbidden to change the dressings themselves, it was possible to watch the process of cure carefully. First the skin is well cleansed of all scales and scabs by a soap-bath, and afterwards the paste applied. The paste wherever possible is covered with a thin layer of pure wadding, and then with a porous Mull bandage. In eczema of the head occurring in children, a 2 per cent. mixture of salicylic acid in vaseline is thickly smeared over the part and covered with a cap; while if the nostrils be inflamed, they are plugged with wool and boracic acid. In eczema of the legs, Martin recommends washing with a weak sublimate or carbolic solution. If ulcers are present, and present a torpid appearance, they are treated with a 5 per cent. solution of nitrate of silver, then cleansed, and thickly covered with some indifferent powder. Iodoform is used only when the ulcer is foetid. Afterwards the inflamed parts surrounding the ulcer are covered with a thin layer of wool and a thin Mull bandage. When a certain progress towards healing has taken place, the paste may be smeared directly upon the ulcer.

### 5. Dietetics in eczema.

Schweninger (*Charité Annalen*, 1886; and *Monatsh. f. Dermat.*, p. 521, 1886) considers that the refuse of incomplete combustion remaining in the system causes eczema, acting from within, as acids, alkalis, colouring matter, &c., act from without. In eczema the patient should at first be placed on a simple dietary, and by degrees this should be made more and more complicated. A simple change of regimen, such as by substituting a solid for a liquid dietary, occasionally gives surprising results. Frequently it is advisable to order only one dish at a meal, although this may be varied *ad libitum*. In an eczema of long-standing the author has obtained admirable results from recommending the consumption of as large a quantity of fluid as possible in fractional doses frequently repeated. In this way Schweninger believes that mineral waters do good.

### 6. The treatment of obstinately-recurring eczema.

Radcliffe Crocker (*Brit. Med. Journ.*, vol. ii. p. 66, 1887) proposes a new treatment for those cases of eczema which persist in recurring when apparently they have been once cured. He believes that in such cases we have to do with a vaso-motor neurosis, and suggests that it may be desirable in such cases to apply counter-irritation to the neighbourhood of the vaso-motor nerves and centres. In the first case quoted he painted blistering fluid over the nape of the neck, and although the case was very unpromising the result was good. The author then extended the treatment, using milder counter-irritants, such as mustard plaisters or leaves, instead of

blisters, and still with good effect. The position of the counter-irritant should be varied according to the region affected. It seldom fails to allay the itching, in many cases the redness and swelling subside entirely, and in no case has Crocker noticed an outbreak of eczema in the site of the counter-irritant. My own opinion is that eczema is a nervous disease. I can confirm Dr. Crocker's view as to the value of counter-irritation in preventing relapses.

### 7. The treatment of impetigo.

Saerbs (*Brit. Med. Journ.*, vol. i. p. 739, 1887) recommends turpentine as a local application for impetigo. It should be well rubbed into the skin with the fingers, and after five minutes be washed off with carbolic soap and warm water. Finally tincture of iodine should be applied. The treatment should be carried out once or twice a day, and is said to cause itching, but no pain.

Vidal (*Journ. of Cut. Dis.*, p. 323, 1887) first removes the crusts by poultices, and then rubs in an antiseptic solution, usually baryta water or dilute camphorated brandy. To each pustule he applies a small piece of "red plaister," made as follows,

R	Emplast. diachyl.	...	...	...	..	27 grammes.
	Cinnabar	...	...	...	...	1.5 „
	Minium	...	...	...	...	2.5 „

spread on fine muslin.

The plasters should be changed every day, and the affected parts washed with the antiseptic solution at each renewal.

Besnier (*ibid.*) removes the crusts and washes the surface with borated water (1 in 50). Then he covers the part with a mask of tarlatan, eight or ten layers thick, steeped in borated water. The whole is covered with sheet india-rubber, and the dressing removed hourly. When inflammation has declined, lotions of borated water, to which a little sublimate has been added, may be used. Afterwards Besnier uses a plaister having the following formula,

R	Unguentum de Vigo	...	...	...	5 grammes.
	Vaseline	...	...	...	30 „
	Boracic acid	...	...	...	1 gramme.

spread thinly on very fine linen.

### 8. The treatment of boils and carbuncles.

Bidder (*Deutsch. med. Wochenschr.*, No. 4, 1887) gives his experience of the treatment of boils and carbuncles by the method of injection of carbolic acid into the substance of the tumour. He uses a 2 per cent. solution of carbolic acid, and injects this

into the infiltrated base, regulating the number of injections and the quantity of solution used by the size of the boil. Afterwards a compress dipped in carbolic water should be employed, or, in its place, simple strapping or mercurial plaister.

**Palasne** (*Journ. of Cut. Dis.*, p. 324, 1887) prescribes for boils Blanchard's pills of iodide of iron, two to four daily. The iodide of iron, however, is very unstable, and therefore the following modification of the treatment is suggested:—Take in a glass of water a teaspoonful of preparation No. 1: powdered sugar 40 grammes, iodised alcohol 40 drops, to be mixed rapidly and placed in a well-corked bottle. Then take immediately a packet of No. 2: iron by hydrogen 8 centigrammes, sugar q.s.

### **9. The treatment of lichen planus.**

**Fournier** (*Monatsh. f. prakt. Dermat.*, p. 432, 1887) recommends arsenic, and especially its subcutaneous administration, in this disorder. He uses a solution of 0.2 grammes arseniate of soda in 10 grammes aquæ cævocerasi, of which 1 drop contains 1 milligramme of the arsenic preparation. Three drops diluted with water may be injected at one time, but the whole daily dose should not exceed 6 milligrammes, given in two injections.

I believe arsenic to be of the first importance in the treatment of lichen planus, but have had no experience of its administration by subcutaneous injection.

### **10. The treatment of pemphigus.**

**Harrison Cripps** (*Brit. Med. Journ.*, Jan. 29, 1887) reports the case of a man, aged fifty-seven years, who gave no history of syphilis, and had suffered for three months from pemphigus of a severe form. He was weak, pale, and cachectic, and all the surface of the body, with the exception of the face, was affected by the bulbous eruption, the bulbæ being filled with serum or serous pus. Small doses of arsenic were administered, and a 5 per cent. oleate of mercury ointment was rubbed into one arm. This one arm rapidly healed, but the remainder of the body showed no change. The ointment was then applied to the whole body, with the result that in seven weeks the patient became quite well.

### **11. The treatment of psoriasis.**

**Haslund** (*Vierteljahrschr. f. Dermatol.*, Heft. iv., p. 677, 1887) writes on the treatment of psoriasis with large doses of iodide of potassium, which he has practised for some years. In the fifty cases published, the largest dose of iodide given was 50 grammes, and the same patient took throughout the cure no less than 2,256 grammes. Usually about 40 grammes daily were taken, and yet no symptoms of iodism were observed! Forty patients were cured, but in some of the cases other methods of treatment were



simultaneously employed. The average duration of treatment was seven weeks, and the first visible signs of improvement appeared on the head at the fourth or fifth week, progressing downwards. The body-weight at the same time increases. Haslund considers that iodide of potassium is superior to arsenic in the treatment of psoriasis, since it effects a cure in a shorter time.

## 12. The treatment of lupus vulgaris.

Brooke (*Provincial Med. Journ.*, p. 535, 1886) reviews the various methods of treating lupus, and recommends the mechanical removal of the lupus tissue by Volkmann's spoon, the screw apparatus, or the galvano-cautery combined with Unna's anæsthetic caustic methods (salicylic acid and creosote). For the latter purpose he prefers the salicylic-creosote plaister. Instead of the plaister he finds a combination of

R	Salicylic acid	...	...	...	20 grammes.
	Birchwood creosote	...	...	...	40    "
	Lard and wax	...	...	...	40    "

cheaper and somewhat more easily pressed into the hollows. He has observed that the pain lasts longer than Unna believes, but that the relief from pain afterwards is complete.

Stowers (*Practitioner*, 1886) uses the sharp spoon in the treatment of lupus. He first empties the blood-vessels by pressure, and controls them by a metal ring attached to a handle. Afterwards he thinks it desirable to encourage free bleeding, but if excessive this may be restrained or arrested by ice-cold water. After scraping he inserts a stick of nitrate of silver into the cavities and sinuses, and dresses with lint soaked in 1 in 40 carbolised oil. Out of seven cases treated, six were completely cured after from one to five repetitions of the process. In the seventh, after seven operations the cure was probable, but not quite certain. In it the duration of treatment was nine years, and in another three.

I have treated three cases during the year of superficial lupus with Unna's salicylic acid plaister; in two the result was most encouraging, but the third required subsequent scraping.

## 13. The treatment of lupus erythematosus.

Brocq (*Journ. of Cut. and Ven. Dis.*, Oct., 1886) has used with good effect a mixture of salicylic acid, 1 part; pyrogalllic acid, 5 parts; flexile collodion, 50 parts, painted on in successive layers and removed when suppuration commences. He also employs scarification, black-soap plaister, mercurial plaister, and the mixture of yolk of egg and vinegar (mentioned in the last "Year-Book"), alternating one for the other as they seem to lose their effect.

**Dr. Brooke**, of Manchester (*Med. Chronicle*, vol. v. p. 424), in reviewing the above-mentioned paper, states that in his opinion such methods are unnecessary, and injudiciously vigorous in acute cases, where he prefers soothing measures.

**Besnier** (see *Journ. of Cut. Dis.*, p. 199, 1887) uses, in certain forms of lupus, a pill of iodoform, made by mixing 10 centigrammes each of iodoform and soap. The dose may be increased if the drug is well borne.

**Ravogli** (Washington Congress, and *Monatsh. f. prakt. Dermatol.*, p. 930, 1887), after discussing the etiology of lupus, said that he disapproved of caustics and of scraping, which latter had given him no good results. He had treated his cases best with ichthyol, and in three patients the disease was definitely cured.

#### 14. The treatment of acne.

**Lassar** (*Therap. Monatshefte*, No. 1, 1887) uses a modification of Wilkinson's ointment of the following formula :—

R	β. naphthol.	...	...	...	150 grains.
	Sulph. præcip.	...	...	...	750 „
	Vasel. flav. or lanol puriss.	}		āā	375 „
	Sapon. viridis	...	...		
	M. leniter terendo fiat pasta.				

The paste is spread in a thin layer on the affected skin, and left on for fifteen to twenty minutes. A burning sensation is felt, which soon disappears, the ointment is then rubbed off, and powdered talc dusted over. This is followed by a slight inflammatory reaction, which soon gives way to browning of the skin, and finally desquamation. The whole process is compared to the browning, etc., of sunburn. The paste, in addition to being of great service in acne, is also of value in sycosis of the beard and in lupous granulations.

**Besnier** (*Journ. of Cut. Dis.*, p. 323, 1887) for the treatment of acne rosacea insists that—

1. The food should be easy of digestion.
2. The intestinal, renal, and cutaneous functions must be stimulated by purgatives, diuretics, and sudorifics, so as to get rid of all effete matters.
3. All external irritants, such as cold winds and hot fires, must be avoided.
4. Topical irritants must be applied at the point affected. In mild cases he recommends the application nightly of equal parts of soap and precipitated sulphur. If the irritation becomes too great, an emollient ointment, or poultices of potato-flour, may be used to allay it, and then the treatment may be recommenced.

If the rosacea is very slight, a lotion of the following formula may be used,

R	Precipitated sulphur	...	...	50 grammes.
	Glycerine...	...	...	30   ,,
	Camphorated alcohol	...	...	80   ,,

to which rose-water may be added if desired.

5. Internally there may occasionally be employed with effect hamamelis and ergotine.

### 15. Hypertrichosis.

Brocq (*Monatsh. f. prakt. Dermatol.*, p. 84, 1887), after reviewing the various conditions which render it desirable to remove hairs, and the different ways in which this may be effected, states that the best method is by electrolysis. For this operation he uses a fine gold or platinum needle, which he inserts into the hair-follicle; the skill of the operator must determine the depth to which the needle is to be inserted. The current is then allowed to pass through the needle, and effects the destruction of the hair. Brocq finds that the pain produced is usually moderate, and no cicatrix is left. It is not possible to remove more than thirty-six hairs in a sitting of three-quarters of an hour.

Prince (*Boston Med. and Surg. Journ.*, Nov. 4, 1886), however, writes that scars are often produced, and are due to the use of a current of too great strength. He thinks it very desirable to measure the current by the absolute galvanometer, since cells differ much in their strength. A current of one milliampère passing from two to three seconds is the best, and the current should never exceed two milliampères. The positive electrode should not be held in the palm, because of the resistance of the thickened skin, and the uneven pressure exerted upon the electrode. Prince suggests that a large electrode covered with chamois skin, or a thin layer of absorbent cotton, should be fastened to the forearm.

### 16. Melanoderms.

Leloir (*Journal des Connaiss. Médicales*, 1886; and *Monatsh. f. Derm.*, p. 85, 1887) recommends for the treatment of pigment-spots the application of a solution of chrysarobin in chloroform, covered with traumaticin, as is used in the treatment of psoriasis. He finds the application to be of use only in superficial melanoderms, while in those which are deeper it is of no avail.

### 17. Treatment of keloid by electrolysis.

Fournier (*Monatsheft. f. prakt. Dermatol.*, p. 942, 1887) reports a communication upon this subject made by Brocq to the Société Médico-pratique of Paris. Keloid has been treated of late years



by the plaister of Vigo and by scarification, but with only slight success. Brocq while trying to remove hairs from a keloid by electrolysis in the way practised by Hardaway, of the United States, noticed that the keloid itself diminished under the influence of the electric current. The good results showed themselves only after several sittings, or at least some time after the first sitting. Brocq uses a Chardin's mercuric-chloride battery of 24 elements. The positive pole is a metal cylinder, which the patient holds in his hand; the negative pole is a platinum needle covered to a certain distance from the point with shellac. The needle is plunged into the keloid; this part of the operation is somewhat difficult and painful, but is rendered somewhat easier by a twisting movement of the needle. The pain can also be much diminished by a subcutaneous injection of cocain. The current is allowed to pass through the tissue, gradually increasing in strength until it reaches 5 milliampères; with a stronger current the pain becomes unbearable. A yellowish-white zone is formed round the needle, with ray-like lines proceeding from it. Brocq considers that the operation may be repeated every 8 days, but not less than every 14 days.

Guyard (*Thèse. de Paris*, 1886; see *Monatsheft. f. Dermatolog.*, p. 475, 1887) quotes seven cases treated by Vidal's method of multiple scarification, in which good results were obtained. The first effect of the method is to relieve the pain. The scarifications must be repeated at regular intervals, and continued until all the indurated tissue has disappeared. Any return of the scar-tissue must be similarly treated. Internal treatment, he considers, is only of use when there is a syphilitic or scrofulous diathesis. Extirpation is to be recommended when the patient is weak, or when there is a special tendency to keloid formation. During cicatrization the wound should be compressed, in order to favour the healing.

In small keloids I prefer Vidal's treatment by scarification.

### 18. Insect bites.

Bernbeck (*Journ. of Cut. and Gen. Urin. Diseases*, p. 406, 1887) states that salicylic acid, 1 part to 19 parts of flexile collodion, or 1 part of corrosive sublimate to 1,000 parts of collodion, painted over the "bites," will quiet the pain at once, and usually prevent swelling.

**19. Pediculi pubis** (*ibid.*) are destroyed by a 5 per cent. calomel ointment with less inconvenience than by the more commonly-employed blue ointment. A corrosive sublimate bath of about half an ounce to thirty gallons of water will kill all the pediculi.

*Vinegar* applied to the hairy parts will best detach the eggs from the hairs and destroy their vitality, without which recurrences may be frequent.

*Ether*, too, is recommended for the same purpose.

**Thomas** (*Monatsh. f. Dermatol.*, p. 95, 1887) finds that one application of the ether-spray destroys the pediculus pubis more easily than any other remedy.

## 20. Pruritus vulvæ.

**Julien** (*Monatsh. f. prakt. Derm.*, p. 232, 1887) recommends—

Zinc. oxyd. pur.	...	...	...	...	25·0 parts.
Acid. salicylic	...	...	...	...	1·0 „
Glycerin. amyli	...	...	...	...	25·0 „

## ! 21. The treatment of alopecia areata.

**Vidal** has employed in this affection a treatment, by means of blisters, which has been used and strongly recommended by **Schachmann** (*Annales de Derm. et Syph.*, March, 1887). The blisters must be repeated as soon as the skin has recovered from one application, until the normal hair begins to grow. The other parts of the head should be rubbed with the following lotion:—

R. Essent. terebinth.	...	...	...	...	...	3ij.
Ammoniaë	...	...	...	...	...	3jss.
Aquæ	...	...	...	...	...	3x.

## 22. Gangrene caused by iodine collodion.

**Vogelsang** (*Memorabilia. Med. Chir. Rundschau*,—*Edin. Med. Journ.*, p. 568, Dec., 1886) reports a case in which iodine collodion painted over a large surface was followed by gangrene of the skin and sloughing. In one case collodion was applied over a gland which had been painted with iodine, and the result was a slough and an ugly ulcer. In Vienna, in 1885, a physician applied iodine collodion to a frost-bitten finger, causing the loss of the finger. The physician committed suicide on account of the unfortunate notoriety given to the case.

## 23. Lanoline.

**Guttman** (*Zeitschr. f. klin. Mediz.*, Bd. xii., p. 3) has experimented carefully upon the supposed power of lanoline to promote absorption through the skin. He combined iodide of potassium and salicylic acid respectively with the unguent, rubbed the combination into the skin of four patients, and tested the urine for the different drugs, after allowing time for absorption to take place. In 55 per cent. of the experiments no absorption had taken place; in 28·1 per cent. a trace, 9·7 per cent. a slight but distinct absorption, and in 7 per cent. a marked absorption was

found. As the drugs employed are usually easily absorbed and detected in the urine, it may be concluded that lanoline is not superior to lard in promoting such absorption.

A fear had been expressed by a Russian physician, **Burschinski** (*Wratsch.*, No. 24, 1886), that the use of lanoline, prepared as we know from the wool of sheep, might be a means of infecting a patient with anthrax. This has been thoroughly disproved by **Fraenkel** (*Centralbl. f. Bakteriolog.*, No. 5, 1887). He shows that the preparation from the wool by means of alkali, quicklime, acids, steam, etc., must destroy any germs which might be present, and (a crucial proof) he was unable to obtain any cultivations of germs from lanoline so prepared.

**Meyer** (*Deutsch. med. Woch.*, No. 19, 1887) reports a case in which severe general inflammation of the skin ensued upon the application of an impure preparation of lanoline.

#### 24. Ichthyol.

As explanation of an article on ichthyol in skin diseases which appeared in a former number of the journal, **Unna** (*Brit. Med. Journ.*, vol. i., p. 800, 1887) writes, giving very concisely his ideas with regard to its use.

*Internally* ichthyol is indicated: (1) in skin diseases: acne rosacea, nervous forms of eczema in persons of nervous constitution, eczema from teething, lichen urticatus, erythema multiforme, dermatitis herpetiformis, furunculosis, but it is *not* indicated in psoriasis. (2) In the following other diseases: in acute and chronic rheumatism; bronchial asthma; chronic catarrh of the stomach and intestines, together with catarrh of the bile-duct; chlorosis tuberculosis, especially in children; scrofula, and vascular engorgements of all kinds.

#### 25. Clinical studies on resorcin.

**Callias** (Paris, 1887; and *Monatsh. f. prakt. Dermatol.*, p. 938, 1887) has collected into book form the results of his observations upon resorcin, and such as apply to skin diseases may be thus summarised:

In *erysipelas* he has used the drug as an external application every hour, with the most favourable results. The spreading of the disorder is limited, and the patient much relieved. The strength of the application used was

R.	Resorcin	...	...	...	3 grammes
	Glycerine	...	...	...	30    "
	Water	...	...	...	120   "

A 1 or 2 per cent. solution applied to *varicose ulcers* caused a rapid growth of granulations, and most favourable results.



The drug was also found useful in aphthæ of the mouth, scrofulous coryza, phlegmon, the bites of insects, and in in-growing toe-nail; but these belong more particularly to the section on surgery.

## **26. Ichthyol and resorcin.**

Jackson (*Journ. of Cut. Dis.*, p. 215, 1887) records in most damaging terms his experience of these two drugs. He had taken the greatest care to obtain fair samples of the drugs. Ichthyol was tried in thirty cases, comprising acne rosacea, eczema, erythema, simple acne, sycosis, and ulcers. The results in twenty-two cases in which the progress could be followed led Jackson to conclude that ichthyol is an unreliable preparation when used alone; it may be of apparent benefit when exhibited as an adjuvant, but it is not so good as many other old and well-approved remedies. Resorcin was used in nineteen cases, comprising eczema, epithelioma, tuberculosis cutis, lupus erythematosus, lupus vulgaris, and psoriasis; and the conclusions drawn were that resorcin is an irritating substance for use in eczema, but may be of use in chronic cases where active stimulation is indicated. It exerts a powerful absorptive effect on new cell infiltrations, and it is a useful addition to our list of remedies for the treatment of epitheliomatous lesions where surgical procedures are from any cause contra-indicated.

Dunlap (*Journ. of Cut. Dis.*, p. 341, 1887) criticises Jackson's paper, and argues that the drug was not fairly tried after the fashion insisted upon by Unna; and, moreover, the cases were not selected sufficiently for purposes of experiment and comparison. From Dunlap's own observation in Unna's private hospital and practice, he can fully confirm the enthusiastic reports of Unna as to the use of these two remedies.

Zeisler (*Chicago Med. Journ.*, Dec., 1886) has used ichthyol in fifty-six cases of eczema, and found that in one case the effect was negative, in thirteen unknown, in eleven excellent, in twenty-seven good, and in four fair. He, however, used the drug combined with zinc ointment as a base, the strength being 5 to 30 per cent. He also tried the drug in sycosis, acne vulgaris, and acne rosacea. In sycosis, combined with epilation, ichthyol gave good results in seven, excellent results in four, cases. In acne vulgaris, internal administration alone was of avail; while in acne rosacea the results were all good.

## **27. The use of emulsions.**

Knaggs (Washington Congress; see *Monatsh. f. prakt. Dermatol.*, p. 928, 1887) recommended the use of *emulsions* as local remedies, especially in acute and chronic eczema. He wished to combine in

one remedy a salve and a solution, and found that the best way of doing so was to make an emulsion of the two by means of powdered gum, as the fatty substance, vaseline, he had found to be the best, and he recommended the following formula:—

R	Paraffin. mollis	...	...	...	30·0
	Pulv. gummi acaciæ	...	...	...	10·0
	Acidi borici	...	...	...	1·0
	Aquæ ad	...	...	...	60·0

First the paraffin, then the gum, and 15 parts of hot water are placed in a mortar and rubbed into an emulsion. To this are added the boracic acid and the remainder of the water. This basis can be mixed with different medicaments and used in various degrees of consistence.

Unna, in discussing this paper, gave an account of his work on skin varnishes which has not yet appeared in detail. He considered that the combination of vaseline with gum was new, although the method of applying similar emulsions had been in use for some time.

## 28. Cocaine in skin diseases.

Lustgarten (*Wiener med. Woch.*, No. 12, 1887) shows that cocaine is not absorbed when applied to the horny layer of the skin, but if this layer is at all deficient it works in the ordinary way. It is of special use in acute eczema, applied as a 2 per cent. watery solution once or twice in twenty-four hours, and rapidly relieves the itching. In eczema of the genitals he recommends an ointment made according to this formula:

R	Cocain. oleic.	...	...	0·40—1·00	part.
	Lanolin.	...	...	18·00	„
	Ol. olivæ	...	...	2·00	„

A portion of the salve to be rubbed in twice a day, and then the part covered with a powder. For pruritus ani a suppository containing 0·05 gramme of cocain-oleic is of value. Substances the application of which is usually painful are well borne if a 1 per cent. cocain-lanolin be used.

## 29. Concentrated lactic acid in skin diseases.

Knoche (*Journ. of Cut. Dis.*, p. 122, 1887) records cases in which he has used concentrated lactic acid for the treatment of tylosis with chronic eczema, chloasma hepaticum, ephelis, simple tylosis, warts, herpes tonsurans, and pityriasis versicolor. In all the cases rapid cure resulted.

## 30. Medicated gelatines.

Unna (*Monatsh. f. prakt. Dermatol.*, p. 317, 1887) recommends

as a general basis for skin applications a gelatine made with zinc oxide and gelatine, with which other medicaments may be mixed in any desired proportions. Two bases, hard and soft, are suggested :

				Hard.		Soft.
Rx	Zinc oxide	...	...	... 15 parts	...	10 parts.
	Gelatine	...	...	... 15 "	...	30 "
	Glycerine	...	...	... 25 "	...	30 "
	Water	...	...	... 45 "	...	30 "
				100		100

1. The following powders are miscible with either hard or soft zinc gelatine in proportions of 5 to 10 per cent. : chrysarobin, iodate of lead. White precipitate, iodoform, and sulphur may be added to the amount of 20 to 30 per cent.

2. Some drugs coagulate the gelatine, and hence can only be added to the hard gelatine, and in proportions of 10 per cent. Such drugs are carbolic acid, salicylic acid, resorcin, naphthol, creosote, and sulphuret of potash.

The gelatines are recommended for pruritus, erythema, and eczema, for the scaling after acute exanthm, ichthyosis, acne, ulcers and wounds. For superficial skin inflammations, induced by the application of drugs, a combination of zinc gelatine with 2 per cent. ichthyol and 5 per cent. sulphur is of value. Eczema accompanied by great irritation is relieved by zinc gelatine, with 2 per cent. ichthyol and 5 per cent. cannabis indica. A gelatine containing 2 per cent. resorcin may be used in ichthyosis for the general body surface, being removed by a bath once a day. The head, face, and hands should be covered with a 2 per cent. resorcin salve every night, to be washed off in the morning. In inflammatory acne the following combinations may be used : zinc gelatine, with 20 per cent. sulphur, or 1 per cent. pup. sulphuris, or 5 to 10 per cent. resorcin, or 1 per cent. sublimate, with or without 2 per cent. of salicylic acid. The gelatines are also of some use as accessory remedies in lupus, psoriasis, and ringworm.

3. Fats, ichthyol, balsams, and tars act as simple diluents. They must be mixed with the hard gelatine only, and in proportions not exceeding 33 per cent.

4. If more than one medicament is to be added, the sum of their amounts must not exceed that of the maximum quantity allowed. Thus the following prescriptions are suggested :

Rx	Gelat. zinc duræ	...	...	...	90
	Resorcin	{	...	...	āā 5·0
	Acid salicyl.		...	...	

and



R Gelat. zinc duræ	...	...	...	67·0
Ol. cadinæ	...	...	...	23·0
Adipis	...	...	...	10·0

5. Powdered substances may be added, but in quantities not more than half the weight of the gelatine.

6. Tannin, pyrogallic acid and oxide of mercury cannot be mixed with the zinc gelatine.

7. Camphor, chloral, camphor-chloral, extract cannabis indica, and corrosive sublimate may be added, the first three in 2 per cent. mixture, the cannabis indica in 2 to 5 per cent.

**Pick** (*Prager. med. Woch.*, No. 9, 1887) has used a similar treatment in a case of prurigo and erythema with excellent results. He considers that the addition of zinc is unnecessary, and used in the case of prurigo a sublimate glycerin-gelatine, in erythema a non-glycerised gelatine.

**Bornemann** (*Hospitals Tidende*, No. 8, 1887) recommends strongly the treatment of ulcers of the legs by Unna's zinc glycerin-gelatine, with or without the addition of ichthyol. He reports eight cases which had resisted other treatments, but yielded to this.

I strongly recommend a trial of Unna's glycerin-gelatines.

### 31. Molline ointment.

In the "Year-Book" for 1886, p. 247, a note was made of a new preparation for skin diseases brought forward by **Kirsten**, of Leipsic, under the name of molline. It is formed by converting lard into soap, by means of caustic potash, in the cold, so that 17 per cent. of the fat remains free, and then the mass is warmed with 30 per cent. of glycerine. The application is easily removed from the skin by water, and does not dirty the clothing. Moreover, when combined with mercury, it forms a much more cleanly ointment than the ordinary blue ointment. In the *Monatsh. f. prakt. Dermatol.*, No. 10, p. 201, 1887, Kirsten brings forward two new preparations of molline with iodine. The first is made by combining *tincture of iodine* with *molline*, and Kirsten considers it far superior to the ordinary iodine ointment made with fat. In colour it is not so deep as that of the ordinary fat ointment, although more tinct. iodi can be combined with the molline than with the fat. He points out, however, that the tincture of iodine-molline decomposes after a longer or shorter time, but not so rapidly as to cause any great inconvenience. He recommends its use in all inflammatory and non-inflammatory swellings of the superficial parts, and gives a long list of diseases in which he has found it of value. We may mention its use in enlargement of

glands, of periosteum, subcutaneous tissue, lymph-vessels; as an abortive application for whitlow, boils, and abscesses; in joint affections, swelling of the testicles, pleuritic effusions, &c.

The second combination is that of moline with iodide of potassium, which, Kirsten believes, should take the place of the officinal ointment made with vaseline (Germ. Pharm.). He quotes **Mylius** as to the undesirability of the latter compound. The moline preparation does not liberate its iodine until it is rubbed into the skin.

**Liebreich** (*Therap. Monatsh.*, No. 4, 1887) shows that all glycerine fats are prone to become rancid, and moline (which is a potash soap made with cocoa-nut oil and excess of fat, glycerine being added) shows this change rapidly.

In moline, again, the free alkali is not completely neutralised, but its action is somewhat hindered, by the excess of fat. Cocoa-nut oil contains more than any other fat of the glycerin-ethers of the lower fatty acids, such as butyric and caproic acids, and the salts of these acids, which forces are very irritating to the skin. **Liebreich** recommends as a substitute the following preparation,

R	Saponis kalini	...	...	...	100 parts
	Lanolini	}	...	...	50—100 „
	Lanolini anhydric		...	...	

as being free in great part from the above objections; and he recommends that moline, on account of its irritating properties, should not be applied to wounds or mucous membranes.

# DISEASES OF THE EYE.

BY HENRY POWER, M.B., F.R.C.S.,

Ophthalmic Surgeon to St. Bartholomew's Hospital.

---

## 1. Physiological action of hydrochlorate of hyoscine.

M. Gley (*Galezowski's Recueil d'Ophthalmologie*, p. 127, 1887) has, in conjunction with M. Rondeau, recently made experiments on the physiological action of hyoscine, which is an alkaloid isomeric with hyoscyamine and atropine. Crystals of hydrochlorate of hyoscine are of white colour, and are very soluble in water. In the rabbit and dog a drop of a one per cent. solution instilled into the eye produces wide dilatation of the pupil in the course of seven or eight minutes, and the accommodation is completely paralysed. In the course of half an hour the opposite eye is found to be affected, though to a less degree. In man the action is still more energetic, the dilatation of the pupil lasting for five days after instillation of one drop of a one per cent. solution; but, in this respect differing from the rabbit—the opposite eye in man does not present any action of the drug. The advantages that are claimed for the hydrochlorate of hyoscine are that it acts with great rapidity, and that it possesses very feeble toxic powers.

## 2. Therapeutical action of drumine.

This is an alkaloid discovered by Dr. I. Reid, of Port Germain, Australia (*Annales d'Oculistique*, T. xcvi., p. 80, 1887), in a species of euphorbia named *Euphorbia Drummondii*, and introduced as a rival local anæsthetic to cocain. In order to obtain it, an alcoholic tincture of the leaves is made and evaporated to dryness. The residue is treated with ammonia and filtered. The second residue is dissolved in hydrochloric acid, filtered through animal charcoal, and evaporated. The alkaloid remains behind and forms a colourless and nearly tasteless solution. It is almost insoluble in ether, but is soluble in chloroform, and forms small acicular and stellate crystals. It appears to be composed of two substances. The plant which furnishes this alkaloid is fatal to



many cattle when accidentally ingested, death taking place in from one to seven days with paralysis of the extremities, and sometimes yellow discoloration of the conjunctivæ. When a few drops of a solution of the alkaloid are placed in the eye of an animal, it becomes rapidly insensible and bears touching with the finger. The pupil dilates to a small extent only. Injection of the solution beneath the skin causes local anæsthesia alone, and no other symptom. Dr. Reid has been successful in inducing in himself anæsthesia of the tongue, nostrils, and hand. The tongue was rendered incapable of perceiving the taste of quinine. Dr. Drumine has been employed with great success in a case of sciatica, and in other instances of acute and yet localised pain. When a strong dose is administered to an animal, death supervenes with paralysis of the extremities, due probably to the circumstance that the remedy after having first acted on the posterior cornua of the cord, acts secondarily on the motor columns.

### **3. Therapeutic value of peroxide of hydrogen.**

Dr. Maklakoff, of Moscow (*Archives d'Ophthalmologie*, T. vii., No. 3, 1887), holds with Landolt that the peroxide of hydrogen is amongst the most valuable of antiseptics. It easily decomposes with disengagement of oxygen when mingled with various normal and abnormal secretions. It is capable of penetrating into the most remote recesses of the tissues, and of effecting what has been termed interstitial disinfection. M. Maklakoff has tested its value in cases of keratitis, when the cornea appears completely infiltrated with pus and with hypopyon, the pus filling the anterior chamber to two-thirds of its height; in such cases he has applied the peroxide of hydrogen two or three times daily after first instilling cocain, and in addition, using once a day a solution of eserine with the best effects. He thinks its value should be recognised not by ophthalmologists alone, but by gynæcologists, and predicts that it will come into very general use by surgeons.

### **4. Importance of local applications in ocular therapeutics.**

M. Abadie (*Archives d'Ophthalmologie*, No. 3, 1887) in a paper on this subject observes that since it has been shown that the greater number of diseases are of microbic origin, the views formerly entertained in regard to treatment have undergone a radical change, so that even in those affections which have hitherto been considered to be referable to the diathesis of the patient, local instead of constitutional treatment occupies the chief place, and owing to the introduction of cocain, various applications can now be well supported that were formerly objected to on account of the pain they inflicted. Amongst such local remedies the

yellow oxide of mercury ointment occupies a prominent position on account of the excellent effects resulting from its use in the scrofulous ophthalmia of infancy. M. Abadie has also found iodoform incorporated with lanolin extremely valuable in some rebellious cases of tuberculosis of the iris when rubbed in carefully for several days in succession. So, too, in some cases of disease of the choroid, massage with lanolin containing mercurial salts has proved most efficacious in promoting a cure.

### **5. Hot water in the treatment of diseases of the eye.**

At the Congress held in Washington in 1887, Dr. Connor, of Detroit, read a paper before the Ophthalmological Section, in which he upheld the advantages to be derived from the use of hot water on account of its effects in producing good nutrition of the tissue, the removal of morbid products and morbid agents, and in promoting speedy repair. For these reasons it proves beneficial in a great variety of affections of the eye, such as mild catarrhal and phlyctenular conjunctivitis in keratitis, in affections of the sclerotic and iris, and even in some cases of retinal hyperæmia. In iritis, when the pupil refuses to respond to mydriatics, hot water will exert a marked effect in assisting dilatation of the pupil. He has observed similar beneficial effects in reducing inflammatory action in catarrhal and purulent ophthalmia, and in relieving the pain in glaucoma and acute dacryocystitis. If tried, the water should be as hot as can be borne with the tips of the fingers without discomfort. The method preferred by Dr. Connor was to take a common tumbler filled to the brim with hot water, and, inclining the head slightly forward, to apply the rim of the tumbler to the side of the nose and to the brow and cheek about the eye, by which means the eye is actually immersed in the water. It can thus be kept in hot water with little trouble for hours at a time. Antiseptics may be added. By this method hot fomentations may be continued without the watchful care of a physician, whilst moist heat by any solid substance as poultices should never be used, except under the direct supervision of the attendant. The local effects produced are contraction of blood-vessels in and about the eye, the control of hæmorrhage in a better mode than by cold water, the destruction of morbid agents, since it has been found that water at a temperature of 132° F. destroys the bacillus of anthrax and many others, whilst that is a temperature that many eyes can bear. It may be observed that dry heat is sometimes beneficial, and this may be applied by placing hops or chamomile flowers in a dry kettle, and stirring them over the fire with a wooden spoon till thoroughly heated, after which they may be

turned out into a silk handkerchief and applied to the part affected.

## **6. Relation of ophthalmic affections to disease of the nose.**

Dr. G. Masini (*Bolletino d'Oculistica*, Anno viii., 11 and 12) points out that atrophic rhinitis is frequently the point of departure of a sclerotising process which extends over the conjunctiva, and he gives cases in which the ophthalmic affection was cured by treatment applied to the nose. He has also observed ulcerations of the periphery of the cornea, which are particularly obstinate under ordinary treatment, and appear to be associated with ozæna. Such ulcerations may proceed even to perforation, yet rapidly assume a more favourable type when the ozæna is cured. He has also seen in association with ozæna a form of parenchymatous keratitis, which commences with slight lachrymation and photophobia. The cornea after a time presents a bluish circle around it, with whitish spots in its substance which coalesce to form an abscess. Severe neuralgia is experienced; vessels advance on the free surface of the cornea. This disease is very resistant to ordinary treatment, but quickly disappears when the ozæna is cured.

## **7. On episcleral faradisation and galvanisation of the muscles of the eye.**

Prof. Eulenburg (*Hirschberg's Centralbl.*, Mars, 1887) finds the percutaneous method of treating paralysis of the ocular muscles to be ineffective, and points out that the introduction of cocain enables the direct method of stimulation to be employed. He applies an electrode of bulbous form to the eye on the affected muscle, and the other electrode, terminating in a large disc 50 centim. square, on the sternum.

## **8. New operation for trichiasis.**

Dr. Jacobson, sen. (*Centralbl. f. prakt. Augenheilk.*, Juli, 1887), recommends as highly effective in relieving the distressing symptoms that accompany trichiasis the following operation, supposing the case to be one of trichiasis of the left upper eyelid:—The operator stands in front, the assistant behind the patient. The right hand of the assistant holds in position the horn spatula of Jäger, whilst with his left hand he allows the stream of a 4 per cent. solution of boric acid, or of a 1 in 2500 solution of corrosive sublimate, to run continuously at a temperature of 35° to 40° C. The operator then makes a horizontal intermarginal incision 6·8 mm. upwards, splitting the lid into a lower segment composed of tarsal cartilage and conjunctiva, and an upper segment composed of the remaining soft parts. The second act consists in



the circumscription of a thin flap of skin, usually from the temporal end of the intermarginal section, either nearly vertically or obliquely upwards or downwards. The skin is detached about 4 mm. from the apex of the flap, transfixed by a needle armed with silk, and the apex then entirely freed. In the third act the flap is carefully laid in the intermarginal wound, and the apex fastened at the nasal side of it. The displaced flap is kept in position by two or three sutures along the lid-margin.

### **9. Treatment of some conjunctival affections.**

Dr. Wicherkiewicz (*Zehender's klin. Monatsbl.*, Nov., 1886) recommends the employment of a powder composed of 1 part of tannin and 3 parts of boracic acid in the treatment of certain rebellious forms of inflammation of the conjunctiva, and especially in cases of chronic blennorrhœa of the conjunctiva, in trachoma and in phlyctenular inflammation of the conjunctiva and cornea.

### **10. Treatment of granular lids.**

Dr. Desormes (*Hirschberg's Centralbl.*, Marz, 1887) states that granular lids are caused by a microbe which was originally discovered in Egypt by Koch, and subsequently demonstrated by Poncet. Its development is promoted by just those conditions which enfeeble the general health, and the treatment should, therefore, be not only local but general. The best local means is copper sulphate dissolved in glycerin. This substance is, however, ineffective if the granulations are too dense and thick, as in old cases. For these the most appropriate agent is concentrated chromic acid, which may be brushed over it, and proves most effective in removing the granulations.

### **11. Treatment of diseases of the lacrymal apparatus.**

Dr. Montanelli (*Bolletino d'Oculistica*, Anno viii., v.) extols as a means of treatment, in cases of dacryocystitis which have proved refractory to other methods, the daily injection into the sac, for a period of twenty-five minutes, of a solution of boric acid containing 40 parts in 1000 of water with 1 gramme of salicylic acid, or  $1\frac{1}{2}$  parts in 1000 of perchloride of mercury. The injection may be made by means of the channelled sound of Bowman, which may be introduced into the superior canaliculus, whilst the free extremity is attached to a caoutchouc tube, the end of which dips into a reservoir containing the above-mentioned fluid placed at a height of five feet above the level of the eye.

### **12. Treatment of severe parenchymatous keratitis.**

The usual mode of treatment of this affection is by the internal administration of mercury and quinine, or of potassium iodide, or by the inunction of mercury. In cases where these plans prove

ineffective, Dr. Abadie (*Graefe's Archiv*, Bd. xxxii., Hft. 3) strongly advocates the subcutaneous injection of solution of corrosive sublimate, and states that it has been extraordinarily effective in his hands.

### **13. Treatment of serpiginous ulcer of the cornea.**

Dr. Dehenne (*Galezowski's Recueil*, p. 210, 1887) gives the following rules for the treatment of this very serious disease of the cornea. In the first place both the upper and lower canaliculus should be slit up, and the lacrymal passages thoroughly washed out with an antiseptic solution of boric acid containing 4 parts in 100. The conjunctival culs-de-sac are to be cleaned with a solution of corrosive sublimate containing 1 part in 2000. The whole of the ulcerated surface should be cauterised with the fine point of a thermocautery heated to whiteness. Should pus be present in the anterior chamber, the cornea should be perforated with the same point and the pus allowed to escape; and, lastly, five or six drops of a neutral solution of sulphate of eserine containing 1 part in 200 should be instilled into the eye four times every day.

### **14. New treatment of conical cornea.**

M. Abadie (*Archives d'Ophthalmologie*, T. vii., No. 3, p. 201), reviewing the different methods of treatment, remarks that since the tension is normal in keratoconus, and that consequently iridectomy can only augment the error of refraction, ablation of the apex with daily cauterisation, with the object of ultimately obtaining a retractile cicatrix, is more rational and ingenious, and is occasionally successful, but it presents the grave inconvenience of a central leucoma. The same objection holds to the use of the trepan. Raehlmann has devised hyperbolic glasses adapted to correct the error of refraction caused by the corneal cone. Galezowski has recently suggested that the cornea should be rendered anæsthetic by cocain, and the pupil contracted by eserine. A small semilunar flap should then be removed from the lower segment of the cornea, eserine instilled, and finally a compressed bandage applied and retained in position for several days. Abadie, in his new method, adopts Galezowski's mode of treatment with some modification, for, instead of excising the flap, he causes the loss of substance by the application of the sharpened point of a galvanocautery. The galvanocautery should be applied at white heat sufficiently firmly to form a groove in the substance of the cornea without actually penetrating the anterior chamber. The groove should be semilunar in form, and, in order that the cicatrix may be invisible, the cautery may be applied to the upper segment of the cornea. M. Abadie finds that the results of the above method of treatment have proved very satisfactory.

### 15. Posterior ophthalmotomy in glaucoma.

In the Congress of Ophthalmologists held at Paris in the course of the past summer, **M. Vacher** (*Archives d'Ophthalmologie*, T. vii., No. 3 1887) read a paper on this subject, in which he observed that, notwithstanding the great services rendered by iridectomy and by sclerotomy, cases every now and then occur in which the glaucomatous process fails to be arrested by these proceedings, and violent pain continues to be experienced. He has met with six cases in two years, and he has practised with success an operation to which he has applied the term posterior ophthalmotomy. In performing this operation, the patient is directed to look downwards and inwards, and with a Graefe's knife he makes a deep incision into the sclerotic 8 or 10 millimetres from the margin of the cornea, between the superior and external recti. The incision should be 8 mm. ( $\frac{1}{3}$  inch) in length, and should permit the escape of some considerable quantity of the vitreous. All antiseptic precautions should be taken, and a pad and bandage carefully applied. In five out of the six cases the result was good. In the sixth case it failed, and evulsion of the nasal nerve was tried, after which, in the course of a few weeks, the tension of the eye gradually fell.

### 16. The treatment of sympathetic iritis.

**Signor Gallenga**, of Turin (*Annales d'Oculistique*, Juillet, 1887), observes that the cases are of rare occurrence where the enucleation of the primitively affected eye has been effective in arresting the progress of iritis when it has already declared itself in the other. In four cases of sympathetic iritis which have been under his care in his clinic at Turin, the instillation of a 3 to 5 per cent. (? 1000) solution of corrosive sublimate from three to five times daily into the eye affected with iritis, together with enucleation of the primarily damaged eye, have yielded excellent results. Gallenga declares, indeed, that in cases thus treated from the outset it may be hoped that a perfect, or almost perfect, recovery may be effected. The treatment should be persevered in for some weeks or months. In the discussion which followed, **Mazza** stated that he had seen a case of recovery from sympathetic ophthalmia after enucleation of the injured eye by the use of mercurial frictions and the administration of salicylate of soda internally.

### 17. The removal of the remains of cataract after operation by injection.

Following out the suggestion of Prof. Wicherkiewicz, referred to in last year's report, **Prof. Chodin** (*Congress Russischen Aerzte in Moskau*, 5th Jan., 1887) adopts and recommends this plan. He



points out that to be effective the capsule should be freely opened and an iridectomy should be practised. The anterior chamber is then washed out with a small syringe charged with a 4 per cent. solution of boric acid. In a discussion which followed the reading of this paper, **Dr. Tarssaide**, of Charkow, observed that the plan had been tried at Charkow, and that it had not proved to be quite free from danger.

The same subject was discussed in the French Ophthalmological Society at the meeting held in May, 1887, at Paris. At this meeting **M. Vacher** (*Compte Rendu de la 5ième Session de la Société Française d'Ophthalmologie, Semaine Médical*, May, 1887) stated that he had first adopted this plan a year and a half previously. He at first used the injection merely antiseptically, employing a solution of the double iodide of mercury and potassium, containing 1 in 12000. He points out that by this means the *débris* of the lens, blood and bullæ of air are all cleared away, and the iris and anterior chambers are bathed in an antiseptic fluid. He thinks care should be taken to regulate the force and continuity of the jet of fluid, and that the temperature of the solution should be raised to 25° or 30° C. to avoid a painful sensation of cold, which is apt to make the patient contract his orbicularis with energy, which may lead to disastrous results. Finding that in most cases the cornea became hazy after the injection of the above-mentioned solution, he came to the conclusion that it would be better to use simple distilled water, and his results have been very satisfactory.

Lastly, a memoir was read on the same subject by **Dr. William McKeown** (*Trans. of the Ophthalmological Society of the United Kingdom*, vol. vi., p. 317, 1886) to the Ophthalmological Society of Great Britain, who stated that he always performed iridectomy in extraction cases, and removed the lens in the usual way, but if any cortex remained behind, and did not at once come away by slight friction through the lid, he introduced an instrument he has devised and named the "scoop syringe" well within the capsule, and gently injected distilled water at a temperature of 100° F. He finds that when flakes of cortex are coming up, a very slight motion of the end of the scoop towards the wound, whilst water is at the same time being injected, greatly facilitates the operation. He does not use the scoop in any way as a lever, and is careful to inflict no injury upon the posterior surface of the cornea. In cases where, after the extraction of a fairly ripe lens, some cortex has been left, and the patient cannot see fingers, a very gentle injection of a few drops of water instantly enables the patient to count the fingers, and the pupil becomes clear at

once. Moreover, without the introduction of the scoop into the interior of the eye at all, but simply by pressing it on the superior border of the wound, particles of cortex or a bag of capsule are easily washed away. The syringe should be sedulously kept clean by passing Condyl's liquid several times through it; afterwards, absolute alcohol, and finally distilled water. In the discussion which followed the reading of the paper, considerable differences of opinion were expressed by different speakers.

### **18. The ætiology and treatment of myopia.**

Dr. M. Knies (*Archiv f. Augenheilk.*, Bd. xxxii., Hft. 3), in a memoir contained in Graefe's Archiv, gives the results of observations extended over six years, and embracing a large number of tests applied to many hundreds of eyes. He notes that the first symptoms of commencing myopia are partly subjective, partly objective. Amongst the former may be mentioned a feeling of pressure in the eye, abnormal sensibility to light, asthenopia, entoptic phenomena, phosphenes and muscæ, all symptoms indicating commencing choroiditis; subsequently defective vision for distant objects is noticed. Amongst the objective symptoms are dilated pupils, and the usual typical changes in the fundus, indicating optic neuritis, yielding of the sclerotic, with rarefaction of the pigment cells. In regard to the ætiology of myopia, Knies ascertained that out of a total of 779 myopic eyes, 81 per cent. had been induced by overwork, and in a large proportion of the remainder the same cause had probably been in operation; there were only 42 cases in which it was certainly excluded. The immediate and efficient cause was long and persistent fixation of the eyes on minute objects. There was no evidence that it was due either to convergence of the eyes, nor to the exertion of the accommodation *per se*. An hereditary predisposition existed in 32 per cent. of the cases, but in nearly all of these the exciting cause of the development of the disease was attention to near work. The treatment of commencing myopia clearly consists of reduction in the hours of work, and all work should be done in a good light. M. Knies thinks that atropine instillations are of very doubtful value; he greatly prefers the myotics, eserine, pilocarpin, and especially morphia. He employs a solution of eserine containing half a grain to the ounce of distilled water, and instils one drop at bedtime every night for four or six weeks, and then at much longer intervals.

### **19. Treatment of detachment of the retina by eserine.**

Eserine in cases of detachment of the retina suggested itself to Dr. Guaita (*Annales d'Oculistique*, Juillet-Août, p. 41, 1887) in

consequence of his observing that a patient suffering from this affection became worse after the employment of atropine, and on consideration it occurred to him that inasmuch as eserine possesses the power of equalising the circulation within the globe, and of promoting the filtration of the liquids of the eye, and hence of occasioning the rapid absorption of such serous exudations as occur in glaucoma, and of such purulent exudations as occur in hypopyon, and of such inflammatory products as form in the corneal tissue, it ought to be efficacious in a disease characterised by the presence of a serous exudation between the retina and the choroid. In looking over the literature of the subject, however, Guaita was unable to find the report of any case in which eserine had been tried. At first sight it would appear that eserine, which is known to diminish the tension of glaucomatous eyes, was not an appropriate remedy in a form of disease in which the tension is already lower than normal; but it is to be remarked that eserine, though it lowers the tension of a glaucomatous eye, does not lower the tension of a normal eye. Moreover, there is a certain analogy between glaucoma and detachment of the retina, for glaucoma in its more advanced stages terminates usually in detachment of the retina, and *vice versâ*, detachment of the retina often terminates in a glaucomatous condition. In both affections abnormal fluid is present in the eye, abnormal in quantity in glaucoma, abnormal in quality in detachment; and lastly, according to Castorani, Dransart, and Warlomont, iridectomy, which cures glaucoma, is sometimes useful in detachment. Guaita records five cases of detachment of retina, four of which were recent, and one of ancient date; in all the instillation of the neutral sulphate of eserine was followed by rapid, marked, and progressive amelioration.

## **20. New instruments for use in ophthalmic practice.**

1. *A Pupillometer*.—This is a small instrument devised by Mr. Walter Jessop, made of German silver by Messrs. Pickard and Curry. It is about three inches in length, flat, thin, and narrow, and with the edges presenting, with a series of semicircular notches of different sizes from 1 mm. to 10 mm. It can be brought into close proximity to the eye, and the size of the pupil easily compared with one of the notches.

2. Mr. Jessop has also devised a new and very inexpensive form of ophthalmoscope, which answers all ordinary purposes. It can be obtained from Messrs. Pickard and Curry, of London.

3. *A refraction ophthalmoscope, with a special arrangement for*



*the electric light.*—This instrument consists of nine convex and fifteen concave spheroid lenses arranged on a single disc, which can be rotated by a milled driving wheel. The special arrangement for the electric light consists of a small lamp which is fixed just below a concave mirror of half-inch focal length. The requisite galvanic current is produced by a small Le Clanché battery. The mirror is fixed, and does not require to be rotated for either eye. The electric apparatus can be easily disconnected, and the instrument used as an ordinary ophthalmoscope, with oil or gas illumination.

# DISEASES OF THE EAR.

BY GEORGE P. FIELD, M.R.C.S.,

*Aural Surgeon to St. Mary's Hospital.*

---

## 1. Suppuration of the middle ear.

Dr. Pierce, of Manchester (*Med. Chronicle*, vol. xi., p. 331), in a short paragraph, gives his experience of boric acid and corrosive sublimate in this affection. With neither has he had great success. Boric acid in a considerable number of cases caused immediate pain and marked increase of a semi-purulent discharge, and sometimes its use had to be discontinued. Corrosive sublimate he has ceased to use, unless some specific or parasitic influence is suspected; and he has occasionally observed marked general constitutional disturbance from its external application.

## 2. Acute otitis media.

Hartmann (*Deutsch. med. Wochenschr.*, No. 19, 1887) strongly recommends a 10 per cent. solution of carbolic acid in glycerin in this affection. In only one out of forty-six cases was no effect produced, and most frequently the pain was entirely removed. If the pain should recur, a further application is necessary.

## 3. Danger of injections.

Miot (*Revue de Laryngol.*, No. 4, 1885; and *Med. Chronicle*, vol. v., p. 328), relates a case in which forcible syringing with warm water was used to remove a plug of wax in the ear. Immediately unconsciousness for several minutes ensued, followed by tinnitus aurium, deafness, and ear-ache. In a week pus was discharged from the ear, and later on very severe and distressing nervous symptoms were observed. These, Miot believes, were due to hyperæmia of the labyrinth and hæmorrhages.

Every aural surgeon has seen similar cases. If the removal of cerumen is attended with any difficulty, a solution (gr. x. to ʒj.) of bicarbonate of soda applied to the ear for a few nights should be used. The plug of wax can then be syringed away without

any difficulty, and we should not so commonly have to treat such conditions as Miot describes.

#### 4. The risk incurred by water entering the ear.

Sexton (*Arch. of Otol.*, Sept., 1887). The author recommends bathers to place some cotton-wool in their ears before entering the water, as certain cases of inflammation of the middle ear from the entrance of water have occurred in his practice.

#### 5. New method of treating chronic aural catarrh.

Seiss (*Med. News*, Feb. 5, 1887). The author has found that in cases of naso-aural catarrh the primary disease in the nose may be successfully treated, but by the methods in ordinary use the inflamed condition of the Eustachian tube is practically uninfluenced, or only very slightly improved. The post-nasal applicator or atomiser fails utterly in relieving the tubal disease, and the old method of injecting fluids through the Eustachian catheters into that canal is known to be dangerous from the frequency with which inflammation of the middle ear follows the practice. Dr. Seiss has accordingly devised a tube resembling in dimensions and shape a Eustachian catheter, but perforated near its point by a number of fine holes radiating laterally only. This tube is fixed to a small syringe, by means of which remedial injections can be applied to the pharyngeal end of the Eustachian tube without any danger of their ascending higher towards the ear, owing to the direction of the openings in the catheter.

Distinguishing three chief forms of tubal inflammation accompanying chronic nasal catarrh, the results of this mode of treatment are noted as follows:—First, cases which showed very active secretion of the tubal glands with turgescence and inflammatory infiltration of the lips of the tube, these appearing red and swollen, were markedly benefited by injecting one of the following solutions: acid carbol. gr. jss., sod. borat. and sod. bicarb. āā gr. ij., glycerin mxx., aq. dest. ʒj.; or mxx. of a saturated solution of boric acid in water and glycerin to ʒj. of water. In cases accompanied with deafness and tinnitus, the latter slowly disappeared, hearing improved, and the turgescence of the lips of the tube visibly diminished. The injections were made twice weekly, the nose and pharynx continuing to be appropriately treated. In the second class of patients less satisfactory results are obtained by this method; these are cases occurring in advanced hypertrophic nasal catarrh. The mouth of the tube is hypertrophied, the colour dull red-yellow below and bright red above; pharyngeal tonsil enlarged and posterior nares partly blocked by adenoid hypertrophies; the mouth of the tube is frequently filled with tenacious mucus. The injections employed in



these cases are, firstly, the boric acid solution as above; and secondly,  $\mathcal{R}$  zinc. sulph. gr. ij., acid. bor. gr. x., glycerin  $\mathfrak{mxx}$ ., aq. dist. ad  $\mathfrak{zj}$ ., repeated twice weekly. Even in these cases, however, the mucus was removed, the tinnitus was much reduced, and the "dull, lop-sided sensation" disappeared entirely. The injections were continued for from three to six weeks. The third class of cases comprises those changes which accompany atrophic rhinitis, the lips of the tube being shrunk, and the mucous membrane undergoing sclerosis. Treatment was then tried by injecting a solution of "Listerine" ( $\mathfrak{zjss}$ . to  $\mathfrak{zviii}$ . of water), and in certain cases Boulton's solution was employed ( $\mathcal{R}$  tinct. iodi. co.  $\mathfrak{mxx}$ ., acid. carbol.  $\mathfrak{mvi}$ ., glycerin  $\mathfrak{zvii}$ ., aq. dist.  $\mathfrak{zv}$ .). Tinnitus was slightly relieved in these cases; moreover, the use of the instrument without injections seemed almost equally effective with the injections. This catheter may also be used in acute tubal catarrh following coryza, solution of cocain, morphia, and boric acid being employed; likewise in those cases of tubal catarrh usually accompanying purulent otorrhœa. The instrument must be carefully used. First the beak is to be fixed in the mouth of the Eustachian tube, the solution is injected without forcing the beak against either wall of the tube, and the catheter must then be immediately withdrawn, so as to avoid choking the patient when the palate relaxes; in other respects the catheter is to be introduced like the ordinary Eustachian instrument.

## **6. Novel methods of treating diseases of the middle ear.**

**S. S. Bishop** (*Journ. of the American Med. Assoc.*, vol. i., p. 67, 1887). The author has found the old methods employed for evacuating increased and perverted secretions of the middle ear (viz., injections into the ear, paracentesis of membrana tympani, and inflation) so ineffectual and comparatively severe, that he has employed a very simple and apparently effective method to supplant them in many cases. This method is essentially the reverse of the experiment of Valsalva. The patient closes his nose and mouth, and then makes an inspiratory effort; the result is to diminish air-pressure in the pharynx, and to cause the discharge of air from the tympanum, and with it of any secretion collected therein or in the Eustachian tube, into the pharynx. That this has occurred may be seen by the help of the rhinoscopic mirror, the discharge being apparent on the pharyngeal wall corresponding to the diseased ear, if one only be affected. When the patient now clears his throat, the discharge is forced on to the fauces and tongue, where it often leaves, when muco-purulent, a peculiar metallic taste. When the discharge is removed, the patient

swallows, or performs the experiment of Valsalva, whereupon air re-enters the tympanic cavity. Inflation of the middle ear should not be done—at all events, for some short time after this—for fear of driving back some of the discharge which may still be in the Eustachian tube. Should the secretion be too viscid to allow of being thus removed, a previous injection of warm water or alkaline solution may be employed to soften it. This method may be rendered impracticable by excessive resistance in the tube. Thus its walls may be inflamed, and close it entirely and firmly; or the opposite walls may be stuck together by tenacious mucus. But several attempts should be made as above, and a long inspiration may succeed where a short one failed. Where the walls of the tube are themselves the main obstacle, their swelling may be reduced by the employment of astringent Eustachian bougies; when accumulated and sticky secretion is the cause, this may be removed by gentle suction through a Eustachian catheter by means of a syringe or Politzer bag without a valve. After this the simple inspiration will probably succeed in further relieving the patient. The great advantage of this method is apparent in those cases where the inflammation extends to the mastoid antrum and cells, and where evacuation is evidently preferable to driving the secretion into these very parts by inflating the middle ear; and indeed it might, it appears, advantageously replace the inflation method in every case. In another set of cases also this treatment is, in the author's experience, very useful, viz., in those of chronic catarrhal otitis media, where the mucous tissue is proliferated, the ossicles are partially ankylosed and adherent to the walls of the tympanum, with consequent retraction of the tympanic membrane. By alternating the exhaustion with inflation, either by Politzer's bag or by Valsalva's experiment, movement of the ossicles is produced, and this must tend to break down adhesions. The truth of the theory is proved by the practical results of the treatment. The patient can employ it without the help of the surgeon. In cases of impermeable Eustachian tube the author has fixed an india-rubber tube into the external meatus, and this can be filled with, or exhausted of, air by the patient blowing and sucking at the other end. If Siegle's pneumatic otoscope be used for the same purpose, the surgeon can observe the alternate extraction and bulging of the membrana tympani with each expiration or inspiration of the patient.

Another new method of the author's is applicable when the membrana tympani is perforated. The external ear is cleaned, and then filled with the warm solution which it is desired to introduce into the tympanum. The patient's head is inclined to

the opposite side, and he performs the above-mentioned exhausting experiment. The fluid at once enters the tympanum and Eustachian tube, provided that the latter is patent. This method has likewise been attended with excellent results ; boracic acid and zinc sulphate being thus applied without the use of the Eustachian catheter.

### **7. Abscess of the brain from ear disease.**

Dr. Barr (*Brit. Med. Journ.*, vol. i., p. 723, 1887), in the discussion on abscess of the brain, at the Glasgow Medico-Chirurgical Society, referred specially to the connection of such an affection with ear disease. He maintains that the primary disease is almost invariably in the middle ear, rarely in the internal or external ear, and that the tympanum, antrum, mastoid, and the mastoid cells are more especially affected. The ear disease is usually a chronic purulent inflammation, and the exciting cause of the brain abscess is frequently a blow on the head or ear, or some irritating influence acting upon the ear. Dr. Barr points out that chronic ear suppuration is by far the most common cause of cerebral abscess. Pus may obtain direct access to the brain, but more frequently the purulent infection is carried by means of the lymphatic and venous channels, and sometimes by direct extension from the carious bone to the overlying dura mater; while in children the actual contiguity occasionally found between the dura mater and the membrane lining the tympanic cavity will serve as the communicating agent. Dr. Barr is in favour of Dr. Macewen's method of treatment, in which the skull is opened about two inches above the ear, and when the pus is reached another opening is made lower down, nearly on a level with the floor of the middle fossa of the skull. Through the two openings a current of fluid can thoroughly cleanse the abscess cavity. Dr. Barr does not think it advisable to open the mastoid cells invariably as preliminary to the larger operation. He considers that by so doing we may inflict injury by the concussion of the skull, and occasionally there may be risk of wounding the lateral sinus.

A case is recorded by Noquet (*Rev. Mens. de Laryng.*, &c.) in which frequent epileptic attacks were at once got rid of by treating a simple chronic catarrh of the middle ear, which had existed for some time, the patient being unconscious of his deafness on that side.

### **8. Excision of the membrana tympani and malleus for thickening of the mucous membrane of the middle ear.**

A case of the above nature is reported by Baracz in the *Wiener med. Wochsch.*, No. 10, 1887. All other remedies had failed, and



although by this operation the hearing was not improved, the subjective noises ceased after its performance.

**Sexton** (*Arch. of Otolog.*, 1887), in cases of chronic purulent inflammation of the middle ear, scrapes out the broken-down tissue, and when the incus and malleus are detached, removes them likewise.

**Bishop** (*Arch. of Otolog.*, 1887) cites fourteen cases of chronic non-suppurative catarrh of the middle ear, in which he removed a portion of the membrane without touching the ossicles. The worst result was suppuration of the middle ear. Nearly all patients said they heard better, but in no case was the improvement very great.

**W. H. Baker** (*Arch. of Otolog.*, 1887) deprecates the operation of removing the auditory ossicles for the radical cure of otitis media. In all his cases he has found boric acid of the greatest benefit. (I referred to this subject in the "Year-Book" for 1886.)

### 9. On opening the mastoid process.

**Bircher** (*Korrespbl. für schweizer Ärzte*, 1886). The author had three cases of primary mastoiditis ending favourably without any operative interference. When secondary, the symptoms and treatment are the same as those of retention of pus. The incision for relief should be made 1 c.m. behind the auricle, and frequently a subperiosteal abscess will be met with; but generally there is, in addition, a true bone abscess, which also requires opening. After escape of the pus the wound is disinfected and drained. The dangers incurred are: injury to the facial nerve or to the transverse sinus, and of the cranial cavity possibly opening. In one case the sinus was opened without any evil result, though this is the most dangerous accident. Injury to the facial nerve may lead to permanent paralysis.

**Lucae and Jacobson** (*Arch. of Otolog.*, vol. iv., 1887) operated on 100 patients by opening the mastoid cells. Fifty-seven patients were cured, 31 were partially improved, and 12 died (but not in consequence of the operation, one death being independent of the ear disease). In 16 cases there was acute inflammation of the mastoid process; in 37, subcutaneous or subperiosteal abscess; 41 had fistulæ communicating with diseased bone. In 25 cases there was immediate danger, and of these 8 died. The instruments employed were the hammer and chisel, and sharp spoon. In eight cases the transverse sinus was exposed. Irrigation with a 1 to 2 per cent. solution of carbolic acid was employed, and plugs of iodoform gauze were used, as were india-rubber and lead drainage tubes in the later stages of recovery.

**Sexton** (*Arch. of Otolog.*, 1887), after giving statistics of 2,366

cases of acute and chronic otitis media, discusses the question of trephining the mastoid process, and comes to the conclusion that it is easier and better to procure discharge through the external auditory meatus.

**Dr. St. John Roosa** (*Arch. of Otolog.*, June, 1887), as an appendix to a paper on diseases of the mastoid process, gives a historical sketch of the operative treatment of these affections. The first real advocate of the operation for opening the mastoid process in suppurative disease of the tympanum appears to have been Troeltsch, who perforated the bone with a blunt, stiff probe. Since then the operation has become generally acknowledged, and has been frequently performed. Some recent writers, as **Shaw-bridge** and **Theobald**, object to the operation, having seen many cases of purulent disease of the tympanum, and yet saved them all without trephining the mastoid in a single instance. The author, however, holds the operation to be useful, and undoubtedly indicated in all cases where there is pus without a sufficient outlet. The only doubtful cases are those in which the tympanum requires freer drainage, whilst the mastoid process itself is unaffected. As regards the methods of operating, and the instruments to be used, the author regards them as of little moment, some writers preferring a drill, others a trephine, and some a gimlet for perforating the bone.

#### **10. Peroxide of hydrogen in disease of the ear.**

**C. H. Burnett** (*Arch. of Otolog.*, 1887). In two cases of chronic purulent inflammation of the tympanic attic, in which the usual methods of treatment were unsuccessful, peroxide of hydrogen was used as a disinfecting agent (combined in one of the cases with carbolic acid), and procured a cessation of the discharge, with great improvement of the hearing.

#### **11. Cocain in diseases of the ear.**

**Bishop** (*Arch. of Otology*, Sept., 1887) recommends a 4 per cent. solution of cocain to be instilled into the external meatus as a remedy for the severe pain of otitis media, the membrana tympani not being perforated. The solution should remain in for about five minutes, and the pain, generally soon relieved, seldom recurs. **C. H. Burnett** does not recommend sulphate of cocain, and the hydrochlorate he has found useful only in superficial congestion of the outer and middle ear. A 5 per cent. solution of brucine was, however, found of great use in relieving the pain of otitis externa, and rather less so in otitis media.

I use a 20 per cent. solution of hydrochlorate of cocain in these cases; the weaker solutions are, in my experience, of no use whatever.

## 12. The treatment of polypus of the tympanum.

A. Eitelberg (*Arch. of Otology*, Sept., 1887). The case here recorded is one of polypus of the tympanum without perforation of the membrana tympani—a rare occurrence. The patient suffered intense pain in the ear, and examination showed the membrana tympani bulging posteriorly, and reddish-grey in colour. On inflating with the Politzer bag the swelling did not go down, but the pain ceased entirely. The membrane gave a sense of resistance, and as the bulging continued, the author perforated, and immediately there appeared in the opening a roundish red swelling, later on diagnosed as a polypus springing from the promontory, and possessed of a broad pedicle. Lukewarm baths of a 4 per cent. solution of boric acid, containing also some rectified spirit, were prescribed with advantage, and Politzer's method was likewise employed. The discharge, at first abundant, soon diminished, and the polypus shrank up; when the membrana tympani closed, the patient was dismissed with fair hearing on that side.

## 13. Closure of the meatus externus.

Schirmunski (*St. Petersb. med. Woch.*, 1886). The case was one of complete cicatricial occlusion of the external meatus, occurring as a consequence of scarlatinal otorrhœa in early childhood. An operation had been attempted without success. Hearing was not much interfered with. The cicatrix was perforated with a bistoury, and the external meatus was found much contracted; a cross incision was made, and the cicatricial tissue was destroyed with the galvano-cautery. Tents were employed to widen the meatus, and a thick mass of epidermis was removed therefrom. An india-rubber tube was worn till the wound was healed and a permanent opening secured.

## 14. Carcinoma of the temporal bone.

Kretschmann (*Arch. f. Ohrenh.*, p. 231, 1887). In this paper the pathology of this disease is thoroughly discussed, several cases being quoted, and the author comes to the result that the disease is a good deal commoner than is generally supposed. Regarding the treatment, the author insists upon the necessity of careful attention to suppuration, which in nearly all cases has preceded the tumour-growth. The latter once fairly developed, it is usually quite impossible to remove the tumour entirely. The question as to whether a partial and palliative operation should be undertaken in such cases is negatived by Schwartz, Lucae, and many others. The author, however, records that in several cases removal of the fungating part, with, if necessary, opening of the mastoid process, was followed by relief of pain, hæmorrhage, and foul-



smelling discharge, and improvement of the general condition, but it is extremely doubtful whether such measures tend to prolong life. Should a partial operation be decided upon, the author recommends the sharp spoon as the most suitable instrument. There is, it appears, no great danger of entering large vessels, as the veins become thrombosed long previously and are involved in the tumour, while the arteries remain healthy; the facial nerve is liable to suffer; hæmorrhage after the operation is rarely severe. This treatment may possibly be repeated once or twice, but very soon the disease will have progressed too far to admit of further operative interference, and the patient must be kept in as tolerable a condition as the circumstances of the case permit. Frequent irrigation with disinfectants is necessary, and plugging with iodoform gauze, wood-wool, or other absorbent dressings, is required. The use of morphia is, of course, indicated.

### **15. Galvano-cautery for the membrana tympani.**

Schubert (*Arch. f. Ohrenh.*, November, 1886) describes a galvano-cautery for the purpose of perforating the membrana tympani, as openings thus made close less readily than those effected by sharp instruments. The burner is a thin platinum wire set at a proper angle to the handle, with conducting-wires, and makes an opening of 3 mm. long. The strict antisepticity of the procedure, and the advantage of leaving the edges of the wound seared (thus affording a safeguard against septic infection), are specially insisted on by the author.

### **16. Foreign bodies in the ear.**

Drestanche (*Ann. d. Med. del Ov.*, No. 2, 1887). In one case reported by the author an india-rubber drainage-tube, 3 centimetres long, was removed from the external meatus. Five months previously it had been introduced into a fistula in the mastoid process.

In a second case the patient had tried to commit suicide with a revolver. The bullet (7 mm.) had lodged in the meatus without causing serious hæmorrhage or any other symptom. Several unsuccessful attempts being made to extract it, some bleeding and suppuration were set up; finally the bullet was removed after detaching the auricle posteriorly. The membrana tympani showed a large opening, but the drum appeared uninjured.

### **17. Removal of an exostosis.**

Weinlechner (*Arch. of Otolog.*, 1887). The author removed, by means of the hammer and chisel, an ivory exostosis from the mastoid process of a woman. The mastoid cells were opened, and suppuration of the middle ear with perforation of the membrana

tympani resulted. In the end, however, the patient made a good recovery, with preservation of the power of hearing.

### **18. Aural furuncle.**

**Löwenberg** (Washingt. Congress ; *Journ. of Cut. and Ven. Dis.*, p. 393, 1887) recommends, for boils of the meatus, cocain to give momentary relief, and instillations of a supersaturated solution of boracic acid (one part of the powder to five of strong alcohol).

This treatment for boils in the meatus is very effectual. Some glycerine added in equal quantity to the alcohol is, I think, an improvement on the method here described.

**Uckermann** (*Arch. of Otol.*, March, 1887) reports three cases of relaxation of the membrana tympani produced by a careless use of Politzer's method. Improvement followed treatment by galvanocaustic puncture. The patients were children from five to ten years of age.

Speaking of the prognosis in cases of diminished bone conduction, associated with constant and severe tinnitus of the same side, **McBride** points out that it need not by any means always be unfavourable. He cites a case in which these symptoms disappeared entirely under appropriate treatment of the naso-pharyngeal catarrh from which the patient was likewise suffering. A relapse of the catarrh was attended with the same symptoms referable to the ear, which, however, again passed away as the catarrh improved. In another case these symptoms depended entirely, it would appear, upon the anæmic condition of the patient, and they disappeared under treatment with iron; ammonium chloride was also inhaled, and iodine applied to the mastoid process.

### **19. The establishment of permanent fistulæ of the membrana tympani.**

**McKeown** (*Arch. of Otol.*, March, 1887). The author's method is similar to that of Von Troeltsch. A triangular flap is made with the base downwards; the apex falls, and becomes fixed to the remaining standing part of the membrane by inflammatory effusion (or extravasated blood?). The opening remains as such for weeks and months. The author has employed his method for diagnostic purposes, but more generally for the purpose of treating affections of the middle ear of a non-purulent nature. The majority of cases showed some improvement, some remained unaltered, but none became worse.

**Miot** (*Arch. of Otol.*, March, 1887) removed a hard, painful tumour from the upper part of the handle of the malleus by means of a knife curved on the flat. Improvement of hearing followed.

## 20. The otophone.

J. A. Maloney (*Arch. of Otol.*, Sept., 1887) has invented and perfected an instrument which is to "meet as far as possible the various phases of defective audition." At the same time it does not require to be introduced into the auditory meatus, and it prevents "reverberation or disagreeable resonance," which are a common fault of older instruments. The instrument, though it intensifies sound, preserves at the same time its timbre, and every word is rendered clear to the hearer, the unpleasant gaps and voids in conversation being thus done away with. The otophone consists essentially of a thin disc-shaped membrane, kept in uniform tension by being clamped between two rings round its margin. In this manner it is found that the membrane has only a very slight sympathetic vibration for its own note, but is very sensitive to compound tones.

Three instruments are made, No. 1 being designed to "render clear and distinct all sounds to those partially deaf." No. 2 is "a small instrument, and is fastened to the auricle, and kept in place by the tragus, antitragus, and concha." No. 3 is employed in cases of great difficulty of hearing, and its object is to improve the sense by means of practice through the voice. "This form is intended for use in the education of the deaf-dumb." Numerous cases are then cited by the author to bear out the efficacy of the instrument. Trials were also made on patients apparently deaf-mute, who were, however, able to repeat sounds conveyed to them by means of the otophone, and on having their symbols pointed out to them were, later on, able to repeat correctly the corresponding sounds. Similar results were obtained in cases of deafness acquired at a tender age, and in "semi-mutes." Taking the results altogether, it appears that Mr. Maloney has been able, by means of his otophone, to give a certain power of hearing to congenital sufferers and to those who have acquired the lesion, as follows:—Of five cases of the former, two could distinguish five vowels each, and two three vowels; one patient could, in addition, distinguish the words "Mississippi" and "Baltimore." Finally, one patient was not improved, and complained of pain. Of five patients who lost their hearing between the first and fifth year, two could hear and repeat all vowels, one repeated four vowels and the words "Boston" and "Mississippi," one heard three vowels, and one had experienced no improvement.

From all this Mr. Maloney comes to the conclusion that early training of deaf children should be insisted upon, since the perception may be quickened and strengthened by constant practice; he holds that it is the perceptive tract, rather than the trans-



mitting mechanism, which may be so improved, and no opportunity should be missed of testing so-called deaf-mutes by means of the otophone, as a certain amount of hearing may still be found to exist. In treating such children, continues the author, the best results are seen from the use of ear-trumpets for the voice at close range, so that the hearing may be both aided and improved by more constant and powerful stimulation. The author then quotes Dr. Burnett, who says that the most effective remedy for catarrh of the middle ear, which is the commonest cause of deafness, is sound ; and the stronger it is, within certain limits, the better its effect. Similarly, constant practice keeps the auditory nerves, as it were, in training, and so not only preserves but improves the hearing. He ends by recommending Mr. Maloney's trumpets (which appear to have the membrane fixed in them, though this is not clearly expressed in the text) ; they are adapted externally to the auricle by means of a disc, and are *not* introduced into the meatus, thus doing away with bruising of that canal.

# DISEASES OF THE THROAT AND NOSE.

BY P. McBRIDE, M.D., F.R.C.P.E., F.R.S. EDIN.,

*Surgeon to the Ear and Throat Department of the Royal Infirmary, Edinburgh, and  
Lecturer on Diseases of the Ear and Throat, Edinburgh School of Medicine.*

---

IF we consider the past year with reference to therapeutics of the throat and nose, the result leads very much to the following generalisations. Much has been written as to the value of cocain as a local application, and the principal tendency of such writings has been to show that, as a local anæsthetic, the drug stands pre-eminent, although in certain cases it has a formidable rival in menthol. Now that cocain has been so much reduced in price it is scarcely likely that less efficient substitutes will meet with much favour. The great question of nasal reflex neuroses has furnished the foundation of much literary effort, which, however, cannot be said to have gone far in the direction of determining, except by experiment, an exact method of differentiating those cases which can be successfully combated by attacking the nasal mucosa, from others. From time to time, too, new varieties of neuroses have been described as owing their origin to nasal disease. We shall, however, refrain from reference to these, as they lack conclusive confirmation, and content ourselves by stating that the scientific position of the great question of nasal and naso-pharyngeal reflex neuroses remains very much where we left it a year ago. We have thought it well to begin this section with a general reference to two matters of importance, which, for the above reasons, we have not seen our way to discuss at length.

## TEXT-BOOKS, MONOGRAPHS, AND JOURNALS.

Now, as last year, we avoid reference to works either purely physiological or semi-popular. The following are the more important text-books :—

*Krankheiten der Nasenhöhlen, ihrer Nebenhöhlen und des Nasen-Rachenraumes*, by **Moldenhauer** (Leipzig, 1886).

*Vorlesungen über die Krankheiten des Kehlkopfes, der Luftröhre, der Nase und des Rachens*, by **Schrötter** (Vienna).

We may mention that this work is appearing in fasciculi, of which two only have been so far published.

*The Throat and its Diseases*, by **Lennox Browne** (London).

Although this appears as a second edition, it may practically be looked upon as a new work.

Among monographs, the one which bears most directly upon treatment is

*Nasal Polypus*, by **Woakes** (London). Although these pages are not the proper place for a review, we do not feel justified in mentioning this work without at the same time stating that the views therein propounded are entirely novel, and as such require confirmation. If such confirmation be forthcoming, a radical change in our usual methods of treating nasal polypi will be called for; but inasmuch as this new treatment must then be much more heroic than that at present in vogue, we feel justified in advising the reader to "watch and wait."

During the past year the following journal has appeared:

*The Journal of Laryngology and Rhinology*, edited by **Morell Mackenzie** and **Wolfenden** (London).

## GENERAL THERAPEUTICS.

### 1. Peroxide of hydrogen in catarrhal affections.

**J. N. Mackenzie** (*Practice*, vol. i., No. 1, Dec., 1886, Richmond, Va.; see also *Centralbl. f. Laryngologie*, etc., vol. iii., p. 483) recommends the internal administration of this drug in cases in which there is a profuse muco-purulent discharge, and in which local treatment is ineffectual. He seems to administer about ʒij of a freshly prepared 4 per cent. solution in approximately four times as much water, repeating the dose from three to six times a day. Sometimes he combines this treatment with the application of a spray (containing a 6 per cent. solution) to the throat or nose; it is added, however, that in some individuals the mucosa is too sensitive to bear so concentrated a dose of the remedy.

### 2. Local anæsthetics.

Kawa extract has been found by **Weinstein** (*Wien. med. Blätter*, No. 26, 1887) to produce anæsthesia of the mucous membranes, and also to diminish motor power and reflex irritability.

**Stocquart** (*Archives mens. de Méd. et de Chir. Pratiques*, 4 Janv.,



while **Dillon Brown** (*New York Med. Record*, 23rd July, 1887) has compiled a list of 806 cases, showing 27·4 per cent. of recoveries. Among European authorities intubation of the larynx seems not to have been much put into practice, although **Stoerk** (*Wiener med. Presse*, No. 12, 1887), and **Shingleton Smith and Waldo** (*Lancet*, 18th June, 1887), speak well of it. O'Dwyer's apparatus has also been modified by **Stoerk** and **Sajous**.

### 6. The treatment of laryngeal phthisis.

**Hering** (*Annales des Maladies de l'Oreille, du Larynx, etc.*, May, 1887) reports excellent results from what appear to us extremely heroic methods. Shortly put, the treatment he advocates seems to be : (1) To check tubercular deposits by the submucous injection of lactic acid, or, better, a mixture of iodoform and carbolic acid in glycerine, which he finds less irritating. (2) To incise œdematous and swollen parts. (3) To scrape granulating surfaces and ulcers. (4) To remove tumour formations.

**Major** (*Philad. Med. News*, 13th Nov., 1886) also advocates submucous injections of lactic acid in phthisis laryngea.

**Schmidt** (*Deut. med. Wochens.*, 9th Dec., 1886) advises tracheotomy in certain cases of laryngeal phthisis. He claims for it that the general health is improved, and also that swelling of the larynx and dysphagia are lessened. His rules as to the conditions for operating are as follows : (1) Always in stenosis, and do not wait too long. (2) In severe laryngeal with slight pulmonary disease, even without stenosis. (3) When the lungs are comparatively healthy and the laryngeal disease is making rapid strides. (4) When painful deglutition is present, this affords an additional indication.

**Krause** (*Deut. med. Wochens.*, 9th Dec., 1886) again advocates the lactic acid treatment, and now goes so far as to say that no ulcer can withstand this remedy, unless when extreme prostration exists.

**Lublinski** (*Deut. med. Wochens.*, 23rd Dec., 1886) has used insufflations of iodol, and in a few cases this treatment has been followed by eminently satisfactory results, cicatrization of undoubtedly tubercular ulcers having occurred. Iodol is well tolerated, and does not commonly cause either cough or spasm.

**Rosenberg** (*Berl. klin. Wochens.*, No. 26, 1887) has, after an extended trial of menthol, arrived at the conclusion that it is most valuable as a local application in laryngeal, and probably also in pulmonary phthisis. He applies the remedy, not by means of a brush, but with a syringe, using from 1 to 2 grms. of a 20 per cent. solution in oil. At first he repeats this treatment either once or twice a day, but gradually the intervals are increased.

He also uses menthol inhalations, beginning with 15 drops of a 20 per cent. solution, and increasing the quantity to 30 drops. These inhalations are repeated, if possible, every hour. According to Rosenberg, menthol is more valuable in the stage of ulceration than when only infiltration is present; for this class of cases he still prefers lactic acid, as recommended by Krause. The therapeutic action of menthol is both that of an anæsthetic and an antiseptic. In connection with the last-named property, it is of interest to note that our author has observed that the remedy in its gaseous form destroys the vitality of the tubercle bacillus. We would strongly urge those who are called upon to treat phthisis, whether laryngeal or pulmonary, to peruse Rosenberg's work in the original. His results seem so satisfactory, and his reasoning is so well balanced, that we cannot refrain from expressing a hope that another valuable weapon has been placed in the hands of the laryngologist and of the physician. For our own part we have not yet had sufficient experience in the use of the remedy to warrant any definite expression of opinion.

**Wolfenden** (*Lancet*, 2nd July, 1887) suggests the following simple method of obviating the great difficulty in swallowing fluids often experienced by patients in whom the epiglottis has been destroyed by tubercular ulceration:—The patient lies on a couch, stomach down, and with the legs elevated, and sucks, by means of an india-rubber tube, fluid from a tumbler held in his hand. This method was demonstrated to Wolfenden by a patient who had discovered it for himself. It is also interesting to note that a reviewer for the *Monats. f. Ohrenheilk.*, in his remarks on Wolfenden's contribution, states that he has been able to confirm the observation.

### **7. The local treatment of the trachea and bronchi.**

In a paper of extreme interest, **Schaeffer** (*Monats. f. Ohrenheilk.*, April, 1887) discusses the local treatment of the trachea and bronchi. He refers to the dangerous spasm which may result if no precautions be taken, and thus accounts for the general opinion that this method is more heroic than conducive to the well-being of the patient. After an analysis of the symptoms resulting from an attack of spasm so produced, however, he arrives at the conclusion that the dyspnœa in such cases is due to over-distension of the lungs, and he found that an induced current passed through the larynx from side to side, cut short the paroxysm. On further consideration it seemed to him that the difficulty could be more simply overcome. He therefore now adopts the following plan:—Before the mirror is introduced, the patient expires forcibly; he is then directed to sing "eh," and

finally to perform a quiet respiration, during which the syringe or insufflator is introduced between the cords, and the medicament applied.

Of powders (which he expressly states must not be too fine), Schaeffer has so far employed boracic acid, aceto-glycerate of aluminium, iodoform, benzoate of sodium (diluted with five parts of talc), and nitrate of silver (much diluted); the fluids employed were weak solutions of creosote and of iodine. Liquids, be it observed, are more liable to cause spasm than powders. In connection with this method of treatment it may not be amiss to refer the reader to the experiments of Sehrwald (*Journal de Méd., de Chir., etc., de Bruxelles*, Dec., 1886), who found that in dogs the injection of large quantities of fluid into the trachea is well tolerated.

### **8. Neuroses of the larynx analogous to writers' cramp, etc.**

Under the term "Mogiphonia," B. Fraenkel (*Deut. med. Wochens.*, 17th Feb., 1887) calls attention to affections of the voice due to over-exertion in the course of professional work. Just as we recognise three forms of writers' cramp—spastic, tremulous, and paralytic—so we have corresponding forms of mogiphonia. The spastic form is seen in some cases of so-called phonic spasm of the glottis (*i.e.* spasm on attempted phonation). The tremulous variety gives rise to tremor of the voice, but Fraenkel states that in this case there are other causes at work besides over-exertion, which are not yet thoroughly understood.

Most of the paper is, however, devoted to the paralytic variety, of which he has seen six well-marked cases, besides others less characteristic. This affection he considers by no means very rare. The patient, a singer, teacher, or clergyman, finds that, after using the voice for a time, either in singing, accentuated speaking (in the case of the teacher), or in uttering the deep bass tones of pulpit oratory, phonation becomes first painful and difficult, and finally impossible. At the same time, the voice in ordinary conversation is not affected, and laryngoscopic examination shows no abnormality except that just when the symptoms occur the cords seem to have less than normal tension. This is the form which Fraenkel especially designates mogiphonia ( $\mu\acute{o}\gamma\eta\varsigma$ =difficulty). In the treatment of these cases electricity yielded little result, but in one instance a cure was effected by methodical massage with lanolin.

Kellogg (*New York Med. Record*, 23rd July, 1887) has also referred to the same subject, in apparent ignorance of Fraenkel's



contribution. His general conclusions, both with regard to symptoms and treatment, are analogous.

### **9. Removal of subglottic neoplasms.**

Jarvis (*New York Med. Journal*, 27th Nov., 1886) recommends a new and ingenious method of removing subglottic growths. The instrument employed is practically a combination of Mackenzie's forceps with piano wire. The forceps are made more delicate and wedge-shaped at their extremity than the ordinary variety, while the biting-blades are rounded off. The wire is then passed through rings placed at intervals along the branches, and finally through their extremities. The instrument is then introduced through the glottis and opened. After this the operator passes it over the supposed seat of origin of the growth, closing it when resistance is felt. Jarvis gives an account of a case in which he thus successfully removed two subglottic papillomata.

### **10. Hot douching in acute submucous laryngitis.**

Buckmaster (*New York Med. Journal*, 22nd Jan., 1887) describes a case of this affection successfully treated by douching the larynx with water at 120°.

### **11. Removal of the cricoid cartilage.**

Boecker (*Deut. med. Wochens.*, 28th Oct., 1886) removed the whole cricoid cartilage from a patient on account of a large enchondroma. The arytenoids were left, and the result of the operation was that the patient had to wear a tube, but could, by closing it, speak in a rough but distinct voice.

## **NASO-PHARYNX AND NOSE.**

### **12. Treatment of fibrous tumours of the naso-pharynx by means of electrolysis.**

Voltolini (*Monats. f. Ohrenheilk.*, Oct., 1886) advocates electrolysis in the treatment of this terrible malady in preference to the galvano-caustic snare, because with the latter it is not always possible to eliminate the danger of fatal hæmorrhage. He introduces his instruments from the mouth, and considers that needles (both passed into the tumour) are dangerous, owing to the difficulty of preventing their penetrating far enough to cause inflammation of the membranes at the base of the brain; hence he has now constructed electrolytic forceps and an electrolytic snare in which a small piece of ivory is let into the wire which forms it.

Michel (*Monats. f. Ohrenheilk.*, May, 1887) has met with fibrous tumours in fifteen cases, and of these he has treated eight by electrolysis, of which four were completely, and four only

partially cured. It must, however, be observed that his want of success in the last-mentioned instances was attributable to interruption of the treatment, owing to circumstances beyond his control. He passes two needles into the tumour, and slips over each of them a vulcanite tube (a small Eustachian catheter), and then makes his connections complete. The current used should not be very strong (2 to 6 elements), and the first sitting, being usually painful, must not be unduly prolonged. Gradually, however, the patients were able to tolerate the current for from forty to eighty minutes. Michel's method seems to be to have two sittings a day during from three to ten days. Then owing to headache, malaise, fever, etc., the treatment is stopped for two or three weeks, while antiseptic washes are used. After this the sloughs are usually separated, and treatment must be resumed. In from six to nine months the largest tumours can, according to our author, be made to disappear. It is essential to withdraw the needles, especially that one connected with the + pole, gently and carefully.

### **13. Disease of the antrum of Highmore as a cause of nasal symptoms.**

B. Fraenkel (*Berl. klin. Wochens.*, 18th April, 1887) agrees with Ziem that empyema of the antrum is a more frequent condition than heretofore believed (compare "Year-Book," 1886), and that it may exist without any of the commonly described symptoms. Fraenkel believes that it is most commonly due to the presence of a diseased tooth. Pain is often present in addition to unilateral nasal discharge, but not uncommonly it is frontal. It is therefore of great importance to differentiate between antral and frontal suppuration. This Fraenkel endeavours to do by first carefully wiping away all secretion from the middle meatus and then directing the patient to sit with his head down, a position which will prevent the flow of fluid from the frontal sinus. If, after getting up, fresh secretion is found, he concludes that the antrum is at fault.

With regard to treatment, Fraenkel discards attempts to avoid operation, but prefers opening the antrum from the nose, as suggested by Mikulicz.

Stoerk (*Wiener med. Wochens.*, 23rd Oct., 1886) advocates treatment of these cases by means of tubes introduced from the nose into the cavity, or where this is impossible, up to the natural opening. This line of treatment does not, however, seem to have found much favour with other authorities.

In these cases it is usual to douche the cavity after operation with antiseptic fluids. Combes (*Congrès français de Chir., Séance,*

23rd October, 1886) advocates, in addition, the insufflation of antiseptic powders.

#### **14. Nasal polypi.**

In difficult cases where the growth projects into the nasopharynx, **Lange** (*Deut. med. Wochens.*, No. 11, 1887) recommends the use of a blunt hook. The tumour is fixed with the finger of the left hand while the hook is introduced through the nostril point downwards at first, and then turned so as to encircle the neoplasm, which is finally torn off.

**Bayer** (*Deut. med. Wochens.*, 3rd March, 1887) has observed malignant degeneration of mucous polypi. In one specimen, a bridge of innocent polypoid tissue intervened between the epithelioma and the nasal mucosa. It is noteworthy that this growth had been repeatedly treated with the galvanic cautery before the case came under Bayer's care.

#### **15. Rhinoscleroma.**

**Doutrelepont** (*Deut. med. Wochens.*, 3rd Feb., 1887) successfully treated a case of what seems to have been undoubtedly rhinoscleroma by applying to the affected parts (the upper lip and septum) an ointment composed of corrosive sublimate and lanolin (1 per cent.). He chose this remedy on account of its strong germicide properties.

#### **16. Hysterical sneezing.**

**S. Solis-Cohen** (*New York Med. Journ.*, 29th Jan., 1887) records a case of hysterical sneezing successfully treated by means of the constant current, the anode having been placed on a sensitive spot within the nose, and the negative pole on an indifferent part of the cheek.

#### **17. Hay fever.**

This obstinate affection, which renders the season of warmth and sunshine a time of unmitigated discomfort for its victims, has of late received much attention. We have neither the wish nor the space to take our readers over the innumerable papers which have of late appeared on this subject, but shall content ourselves with a reference to three essays, typical in a general sense of the views at present held by different authorities.

**J. N. Mackenzie** (*New York Med. Journ.*, 26th Feb., 1887) is strongly of opinion that general tonic treatment directed to the nervous system (zinc, quinine, arsenic, phosphorus, etc.) should form part of the treatment. He has also seen good results from the bromides and iodide of potassium. He has tried the constant current, one electrode on the cervical vertebræ, and the other alternately over the cervical sympathetic and nasal passages, but cannot speak definitely of the effect. In his concluding remarks



occurs the following sentence : "The value of the galvano-cautery and other therapeutic measures addressed to the nasal passages will depend to a large extent upon whether the existing nasal disease is the primary cause of the central irritation, whether it is the sequel of repeated attacks of vaso-motor choryza, or whether it is a purely accidental phenomenon."

Roe (*New York Med. Journ.*, 3rd Sept., 1887), while he admits that a nervous temperament may predispose the possessor to hay fever, believes that the primary cause of the affection is almost invariably to be sought in nasal disease. At the same time, he admits the value of tonics, lays stress upon the treatment of any coincident pharyngeal, laryngeal, or bronchial trouble, but insists upon the importance of treatment directed to the nose. "The plan which I have followed in the main," he writes, "has been to remove the redundant tissue in the nose by the cold wire snare before employing other agencies; then to correct any deflections of the septum, and to remove all bony outgrowths; next, with a probe to seek out sensitive areas, and cauterise them with chromic acid or destroy them with the galvano-cautery." Roe is enabled to record thirty-six cures out of forty-four patients.

The treatment recently recommended by Sir Andrew Clark (*Lancet*, 11th June, 1887) consists in applying two or three times, at intervals regulated by the resulting reaction, the following solution to the whole nasal mucosa :

Glyc. acid. carbol.  $\zeta$ i.  
 Quin. hydrochlor.  $\zeta$ i.  
 Hydrarg. perchlor. 1 pt. to 1,000.

Let us, in conclusion, glance at these various methods of treatment. There can be no doubt as to the value of tonic treatment, nor can there, in our opinion, be much hesitation in accepting the destruction of sensitive areas, *i.e.* areas which, when touched with the probe, produce a tendency to sneeze, cough, etc., as a rational, and sometimes effectual, means of treatment. Whether it is always desirable to remove all tissue we may consider redundant is, however, another matter. For our own part, we have met with a number of hay fever cases in which, between the paroxysms, the nasal cavity was healthy, but in which sensitive areas could be found. Sir Andrew Clark's method we must consider as being to all intents and purposes a modification of the caustic treatment, in which carbolic acid is substituted for other caustics. It is possible, however, that this drug may act both as a caustic and anæsthetic at the same time.

# SUMMARY OF THE THERAPEUTICS OF THE YEAR 1886-87,

CHIEFLY IN REFERENCE TO NEW REMEDIES.

BY WALTER G. SMITH, M.D., UNIV. DUBLIN,

*King's Professor of Materia Medica in the School of Physic, Trinity College, Dublin;  
Physician to Sir Patrick Dun's Hospital.*

---

1. THE annals of the past year (Oct., 1886, to Oct., 1887) have not been signalised by any discovery of first-class importance in pharmacology or therapeutics. Pasteur's investigations upon rabies scarcely come within the scope of this work.

Yet it has not been barren of results in the directions of new forms or improved modes of application of remedies, and attention has been prominently directed to the scientific and rational study of the questions of diet and regimen, to the influence of mechanical treatment and of *massage*, and to the effects, for good and evil, of hypnotism and allied conditions.

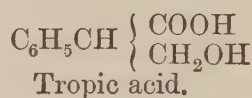
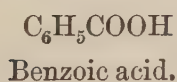
2. Attempts at least have been made to destroy bacilli in the tissues of their victims, one of which (*viz.*, Dr. Bergeon's troublesome and unsavoury plan of treating cases of tuberculosis by gaseous enemata containing  $H_2S$  and  $CO_2$ ) was noticed in the "Year-Book" for 1886. Marvellous effects are claimed for it, but it is not likely to gain general acceptance.

3. The providing of remedies of definite strength, and the substitution for crude drugs of their active principles, are admitted by all to be desirable steps. Hence the artificial production of the vegetable alkaloids is of great practical interest, and we cordially welcome every advance of chemistry in this direction. The synthesis of true conia is now an accomplished fact, and within the last few months MM. Hardy and Calmels (*Compt. Rend.*, cii.) announce the synthesis of a second alkaloid, *viz.*, pilocarpine.

It is obtained from a derivative of pyridine, and its physiological action is stated to be identical with that of the natural base.

4. The labours of the chemist and the physiologist in laying the foundations of a knowledge of the connection between chemical constitution and physiological action, not only tend to greater precision of thought in therapeutics, but also suggest new lines of inquiry by which we shall doubtless ere long greatly profit.

Here we may advert to an interesting paper by **Filehne** on "The Local Anæsthetic Action of Benzoyl Derivatives." He remarks (*Berl. klin. Woch.*, vii., 1887) that for a while cocain seemed to stand alone in its local anæsthetic action. Then a similar property was found to belong to the  $\alpha$ -resin from *Piper methysticum* (Kava). All the ordinary alkaloids have been tested in reference to this point by **Bergmeister** and **E. Ludwig** with negative results. Searching after a substitute, **Filehne** directed his attention to the chemical constitution of the cocain molecule. Just as atropin can be split up into, and re-constituted from, tropic acid and tropin, so, cocain into benzoic acid and ecgonin. Atropin acts slowly as a local narcotic, and sometimes causes slight irritation on the surface of the eye, from which objection homatropin is free. Homatropin is constituted of mandelic acid and tropin, and mandelic acid stands midway chemically between tropic acid and benzoic acid.



Experiment shows that atropin exerts a slight but undoubted paralysing action upon the peripheral ends of sensory nerves, and homatropin a much more pronounced action. Ecgonin is inactive, and therefore the anæsthetic effect of cocain depends upon the coupling of ecgonin with benzoic acid. Reasoning from this, **Filehne** was led to examine the action of *benzoyl-tropin*, and finds it to be a powerful local anæsthetic, acting upon the pupil similarly to all the tropeines. He likewise prepared and examined the action of a number of benzoyl derivatives of other alkaloids, and ascertained that they all possessed a well-marked cocain-like action. Practically, however, these substances are all too irritant for application to the eye.

But the chemical nature of cocain is not definitively settled, for, according to **Stockman**, benzoyl-ecgonin is devoid of anæsthetic properties, its effects being rather those of a tetanising poison. Hence it cannot be at present concluded that the benzoic group is the one essential to local anæsthetic action.



5. *Cocain* maintains its position in therapeutics, and the indications for its uses, which have almost indefinitely multiplied (*cf.* "Year-Books," *passim*), are now generally understood.

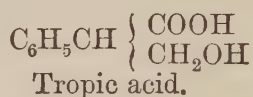
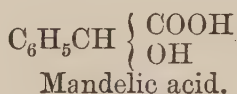
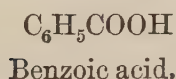
From his experiments on dogs, **Mosso** draws the conclusion that cocain is the best known nervous stimulant, and he anticipates that it will be found of signal use in man whenever we desire to counteract a condition of deep depression, and to produce an energetic stimulation of the nervous system. Cocain has an extraordinary and characteristic influence in raising the animal temperature, sometimes by as much as 4° C. within half an hour. It is antagonistic to chloral, chloroform, and ether; and in case of dangerous toxic symptoms from cocain, Mosso recommends the administration of chloroform or ether in the first instance in order to prevent the respiratory tetanus, which is the most frequent cause of death. (*Arch. f. exper. Path. u. Pharmak.* xxiii.)

It is doubtful if the dangerous qualities of cocain are as widely acknowledged as they should be. In the "Year-Book" for 1886 a number of illustrations were cited of its powers for harm, and we may well recall the sad case which ended in the sacrifice of a patient's life as well as that of the operator, who committed suicide in remorse for his error. **Dr. R. Wood** records in the *Australasian Medical Gazette* the case of a patient in whom alarming symptoms of poisoning followed a large dose of cocain. A man, suffering from dental neuralgia, received an injection of 3 drops of a 10 per cent. solution of cocain. Next day, the pain continuing, the 10 per cent. injection was repeated. This not producing the desired effect, he procured a solution of 20 per cent., of which 4 drops were injected. Five minutes afterwards he became restless, was nauseated, and felt tinglings in limbs and body. To this succeeded cramps, and rigidity of fingers, arms, and legs, with a tendency to opisthotonos. The pulse was feeble and rapid, the face livid, the respirations short and convulsive, and the extremities cold. Under the influence of stimulants, sinapisms, and inhalation of chloroform, improvement gradually set in, was well marked after two hours assiduous care, and within five hours all the symptoms had passed away. (*Nouv. Rem.*) A number of additional cases of acute poisoning resulting from the local application of cocain have been put on record; and, besides all this, the public have acquired a new vice (the cocain habit), which threatens to confer upon medical literature the barbarous term, cocainismus. The great instability of cocain is now well known, simple contact of the *free* alkaloid with water being sufficient to decompose it. (**Paul and Flückiger.**) It is well, therefore, that every practitioner should know how to easily

It is obtained from a derivative of pyridine, and its physiological action is stated to be identical with that of the natural base.

4. The labours of the chemist and the physiologist in laying the foundations of a knowledge of the connection between chemical constitution and physiological action, not only tend to greater precision of thought in therapeutics, but also suggest new lines of inquiry by which we shall doubtless ere long greatly profit.

Here we may advert to an interesting paper by **Filehne** on "The Local Anæsthetic Action of Benzoyl Derivatives." He remarks (*Berl. klin. Woch.*, vii., 1887) that for a while cocain seemed to stand alone in its local anæsthetic action. Then a similar property was found to belong to the  $\alpha$ -resin from *Piper methysticum* (Kava). All the ordinary alkaloids have been tested in reference to this point by **Bergmeister** and **E. Ludwig** with negative results. Searching after a substitute, Filehne directed his attention to the chemical constitution of the cocain molecule. Just as atropin can be split up into, and re-constituted from, tropic acid and tropin, so, cocain into benzoic acid and ecgonin. Atropin acts slowly as a local narcotic, and sometimes causes slight irritation on the surface of the eye, from which objection homatropin is free. Homatropin is constituted of mandelic acid and tropin, and mandelic acid stands midway chemically between tropic acid and benzoic acid.



Experiment shows that atropin exerts a slight but undoubted paralyzing action upon the peripheral ends of sensory nerves, and homatropin a much more pronounced action. Ecgonin is inactive, and therefore the anæsthetic effect of cocain depends upon the coupling of ecgonin with benzoic acid. Reasoning from this, Filehne was led to examine the action of *benzoyl-tropin*, and finds it to be a powerful local anæsthetic, acting upon the pupil similarly to all the tropeines. He likewise prepared and examined the action of a number of benzoyl derivatives of other alkaloids, and ascertained that they all possessed a well-marked cocain-like action. Practically, however, these substances are all too irritant for application to the eye.

But the chemical nature of cocain is not definitively settled, for, according to **Stockman**, benzoyl-ecgonin is devoid of anæsthetic properties, its effects being rather those of a tetanising poison. Hence it cannot be at present concluded that the benzoic group is the one essential to local anæsthetic action.

5. *Cocain* maintains its position in therapeutics, and the indications for its uses, which have almost indefinitely multiplied (*cf.* "Year-Books," *passim*), are now generally understood.

From his experiments on dogs, **Mosso** draws the conclusion that cocain is the best known nervous stimulant, and he anticipates that it will be found of signal use in man whenever we desire to counteract a condition of deep depression, and to produce an energetic stimulation of the nervous system. Cocain has an extraordinary and characteristic influence in raising the animal temperature, sometimes by as much as  $4^{\circ}$  C. within half an hour. It is antagonistic to chloral, chloroform, and ether; and in case of dangerous toxic symptoms from cocain, Mosso recommends the administration of chloroform or ether in the first instance in order to prevent the respiratory tetanus, which is the most frequent cause of death. (*Arch. f. exper. Path. u. Pharmak.* xxiii.)

It is doubtful if the dangerous qualities of cocain are as widely acknowledged as they should be. In the "Year-Book" for 1886 a number of illustrations were cited of its powers for harm, and we may well recall the sad case which ended in the sacrifice of a patient's life as well as that of the operator, who committed suicide in remorse for his error. **Dr. R. Wood** records in the *Australasian Medical Gazette* the case of a patient in whom alarming symptoms of poisoning followed a large dose of cocain. A man, suffering from dental neuralgia, received an injection of 3 drops of a 10 per cent. solution of cocain. Next day, the pain continuing, the 10 per cent. injection was repeated. This not producing the desired effect, he procured a solution of 20 per cent., of which 4 drops were injected. Five minutes afterwards he became restless, was nauseated, and felt tinglings in limbs and body. To this succeeded cramps, and rigidity of fingers, arms, and legs, with a tendency to opisthotonos. The pulse was feeble and rapid, the face livid, the respirations short and convulsive, and the extremities cold. Under the influence of stimulants, sinapisms, and inhalation of chloroform, improvement gradually set in, was well marked after two hours assiduous care, and within five hours all the symptoms had passed away. (*Nouv. Rem.*) A number of additional cases of acute poisoning resulting from the local application of cocain have been put on record; and, besides all this, the public have acquired a new vice (the cocain habit), which threatens to confer upon medical literature the barbarous term, cocainismus. The great instability of cocain is now well known, simple contact of the *free* alkaloid with water being sufficient to decompose it. (**Paul and Flückiger.**) It is well, therefore, that every practitioner should know how to easily



recognise the purity of the cocain he handles. The hydrochlorate, which is the salt most used, should be absolutely neutral, volatilise completely, form a clear and colourless solution in water, give a colourless solution with strong sulphuric acid, and should not reduce permanganate of potassium immediately. (Beckurts.)

6. *Drumine*.—Towards the close of last year a discovery was reported of an alkaloid derived from an Australian plant, *Euphorbia Drummondii*. It was named drumine by Dr. J. Reid, of Melbourne, and was described as possessing properties analogous to those of cocain. But observers in England and Scotland have failed to confirm Dr. Reid's statements. Chemical examination of the solution supplied by Dr. Reid gave no indication of the presence of an alkaloid, and in short, according to Mr. Tanner, the substance in question consists almost entirely of *calcium oxalate*. (*Pharm. Journ.*, Dec. 2, 1886, and June 18, 1887; *Nouv. Rem.*, Mars, 1887.)

A new local anæsthetic, *stenocarpine*, is announced from America by Dr. Clarborne. Two drops of a 2 per cent. solution cause complete insensibility of the eye. (*Brit. Med. Journ.*, Oct. 1, 1887.)

7. *Hyoscin*.—Dr. Mitchell Bruce advocates hyoscin as a cerebral sedative, and gives cases to show that it very rapidly and completely controls those conditions of cerebral excitement variously known as delirium, mania, and insomnia, with restlessness. Hyoscin is an isomer of hyoscyamin, with which it is associated in henbane. So-called "amorphous hyoscyamin" consists in great part of hyoscin (a syrupy body), with traces of crystalline hyoscyamin. Hyoscin does not cause unpleasant dryness of the throat, and is not an anhidrotic. It is best administered in doses of  $\frac{1}{200}$  gr. to commence with, according to this formula :—

	Hyoscinae hydriodatis (Merck)	...	gr. i.
M	Aquæ destillatæ	... ..	℥ 200

In America, where it has been largely used, upon the advocacy of Professor Wood, of Philadelphia ("Year-Book," 1886), the average working dose has been  $\frac{1}{100}$  gr.

Another formula is Dr. Webber's :—

Hyoscinae hydrobrom.	...	..	gr. i.	
Alcohol	...	...	3iss.	
Aquæ ad	...	...	3xx.	M
Dose, 20 ℥. by mouth.				

(*Practitioner*, xxxvii., 1886.)

**Mr. J. Tweedy**, in giving his opinion of the value of hyoscine hydrobromate in ophthalmic therapeutics (*Lancet*, Dec., 1886), says that it will be chiefly of use in cases of iritis, and where it is desirable to produce as much dilatation of the pupil as possible and for as long a time as possible. The fact that it does not seem to cause the unpleasant taste and feeling in the throat which often follows the use of atropin is also in its favour. He employs a solution of 1 in 200.

8. *Absorption through the skin*.—**Dr. Ritter**, of Erlangen, in conjunction with **Dr. Pfeiffer**, has attacked this oft-disputed question, which has acquired renewed interest through the claims put forward by **Liebreich** as regards lanolin. The general conclusion he has arrived at agrees with that held by those who teach that the normal human epidermis does not absorb ointments and fluids, even when finely divided, but that, contrariwise, all substances which irritate the skin, and after a time tend to disturb its continuity, may finally be absorbed through the skin thus altered.

His earlier experiments with ointments prepared with lard and KI, sodium salicylate, and salicylic acid, proved that as a rule, all necessary precautions taken, none of these drugs could be detected in the urine, except when irritation of the skin was caused, as by salicylic acid. Similar experiments with ointments prepared on a lanolin basis gave corresponding results, and **Dr. Ritter** is unable to confirm the favourable influence upon absorption claimed by **Liebreich** for lanolin. Careful experiments with a spray apparatus directed upon the arm, enclosed in a glass cylinder, likewise gave negative results with KI and sodium salicylate (nine experiments). Salicylic acid spray was absorbed because it injured the surface of the skin. (*Berl. klin. Woch.*, xlvii., 1886.)

9. *Lanolin*.—According to **Dr. Toporoff's** researches, lanolin would appear to be a less advantageous basis for anodyne ointments than ordinary lard, the difference in favour of the latter being especially marked in the case of chloroform ointment. The effects of the ointments seemed also to vary considerably with the region of the body experimented upon. (*Lancet*, Nov. 13, 1886.) **P. Guttman**, as the result of a careful investigation, concludes that lanolin possesses no advantage as an ointment basis over ordinary lard in favouring the absorption through the skin of KI and salicylic acid. Similar results would probably be obtained with other drugs. (*Zeitsch. f. klin. Med.*, 1887.) *Per contra*, **Wulfsberg**, of Christiania, finds pure lanolin to be a valuable remedy that he could now ill spare in his practice. It is no panacea, nor can it entirely replace the other fats; but in many

cases it certainly brings about a quicker and more decided cure than the usual remedies. (*Brit. Med. Journ.*, May 21, 1887.)

10. *Iodol*.—**Dr. R. N. Wolfenden** calls attention to the valuable qualities of this as yet little-known drug, which was noticed in the "Year-Book" for 1886. Compared with iodoform, it appears to be of equal value; and it possesses the undoubted advantage of being free from nauseous smell, although not quite inodorous. In nasal, laryngeal, and pharyngeal affections it is of the utmost value, and the pure powder is perhaps the most generally useful application, but an ethereal solution may also be used. In laryngeal phthisis iodol is of signal service. (*Practitioner*, 1887.)

**Lublinski** also extols iodol in the treatment of tubercular laryngeal affections. **Pick**, of Prague, has employed iodol in a number of cases of catarrhal, suppurative, ulcerating, and syphilitic affections with good effects. It acts, on the whole, like iodoform, but does not form a crust on an ulcerated surface. Internally it may be usefully substituted for iodide of potassium when we desire a persistent but not very intense iodine action. Iodol is very slowly absorbed and slowly excreted. **Pick** administers  $\frac{1}{4}$  to  $\frac{1}{2}$  gm., in capsules, morning and evening for two days, then leaves it off for one or two days, to again resume it, and so on. (*Therap. Monatshefte*, Jan., 1887.)

11. *Iodoform poisoning*.—In an important paper by **Dr. Cutler** (*Bost. Med. and Surg. Journ.*, pp. 503, 108) a *résumé* is given of seventy-seven reported cases of poisoning consequent upon the use of iodoform in the treatment of wounds. The general symptoms were those of poisoning by iodine, namely, persistent taste and smell of the drug, impairing appetite and digestion, headache, sleeplessness, and delirium, the latter usually of a melancholy character, in extreme cases passing into absolute apathy with involuntary dejections, rapid feeble pulse, and progressive marasmus. Several cases are mentioned in which a most satisfactory progress of the wound was coincident with the passing of the patient into almost a typhoid condition. **Dr. Cutler** arrives at the conclusion that (1) fresh wounds, or unhealthy or tuberculous surfaces, are the only cases fitted for the application of iodoform; (2) only a thin layer or small amount of iodoform should be applied; (3) when granulations appear healthy, iodoform should be omitted; and (4) at the first symptoms of poisoning, or even coincidently with the first use of iodoform, compounds of alkalies with organic acids, such as potassium acetate, should be given by the mouth at frequent intervals. If severe symptoms supervene, transfusion with a solution of common salt is recommended, and the wound, after being washed free from iodoform with pure water



and a solution of an alkaline carbonate, should be dusted with magnesia. (*Pharm. Journ.*, Oct., 1886.)

12. In organic chemistry a number of new "aromatic compounds" have been investigated, and the groups of antipyretics and antizymotics continue to receive a large share of notice. One of the most important and interesting achievements, from a purely chemical point of view, is the artificial formation of grape-sugar by **Drs. Fischer and Tafel**, of Würzburg; but a compound of more interest at present to the practitioner is *saccharin*, which was briefly noticed in the "Year-Book" for 1886. It is a nitrogenous body, derived from toluene, and has no affinities to the carbohydrates or to the sugars proper, save in the particular quality of sweetness.\* Its formula is  $\text{C}_6\text{H}_4\overset{\text{CO}}{\underset{\text{SO}_2}{\text{N}}}\text{H}$ . One part in 70,000 parts of water (neutralised) has a distinctly sweet taste=1 part of cane or beet sugar in 250 of water. It is a white crystalline powder, of acid re-action, soluble in 500 parts of distilled water, and a little more soluble in alcohol and ether, and in warm glycerine. A 4 per cent. solution by weight is a saturated solution in rectified spirit (spiritus saccharin), and is a convenient solution for dispensing. (**Martindale**.)

Its salts also possess a strongly saccharine taste, but on adding saccharin to a strong solution of bicarbonate of sodium effervescence occurs, and a distinctly aromatic flavour mingled with the sweetness is developed. **Aducco and Mosso** find it innocuous to frogs and dogs; similarly in man, according to **Stutzer and Dreschfeld**. It seems to undergo no change in the body, and can be discovered unaltered in the urine. Its use is indicated in diabetes and obesity, and, according to **Levinstein**, diabetic patients in Berlin have been treated with it for several months without experiencing any ill-effects. It is slightly antiseptic. From  $\frac{1}{2}$  gr. to  $1\frac{1}{2}$  gr. of saccharin will sweeten a cup of tea or coffee. (**Adami**, *Med. Chronicle*, iv.)

As illustrative of the pharmaceutical uses of saccharin in disguising the taste of medicines, **Mr. Martindale** gives the following experiments:—Salicin, 20 grains in one ounce of water are effectually covered by 30 minims of the above-mentioned spiritus saccharin, 30 grains of salicylate of sodium are disguised by the same quantity, and one part of the spirit to seven parts respectively of liquor strychninæ and tincture of nux vomica makes these very palatable. With quinine it is not so successful, one part of the

\* **Péligot** used the term "saccharin" to designate a dextro-gyrate sugar obtained by heating glucose with lime.

spirit to three parts of tincture of quinine being required to mask its bitterness. One part of spiritus saccharin to three parts of tincture of perchloride of iron disguises its taste; and the extreme nauseousness of liquid extract of cascara is covered by an equal volume of the spirit. (*Brit. Med. Journ.*, Oct., 1887.)

13. *Salol*. — This recently-introduced drug ("Year-Book," p. 289, 1886) has been studied by several observers. **Bielschowsky** reports nineteen cases of acute rheumatism, of which fourteen were very serious, and all did well under the use of salol. In eight cases the attacks re-appeared, but disappeared completely upon administration of the salol in smaller doses than at first. According to **Rosenberg**, salol can, within twenty-four or forty-eight hours, absolutely reduce the fever and relieve the pains of rheumatic fever, but the disease is more apt to relapse with salol than with salicylic acid. One and a half grammes are given at the commencement of the attack, and then 1-gramme doses every two hours. Sometimes it causes singing in the ears, sweating, nausea, and vomiting.

**Feilchenfeld** invites special attention to the value of salol in the treatment of vesical catarrh and pyelitis.

**Herrlich** has employed salol in twenty-five cases of articular rheumatism, in a series of cases of chronic rheumatism, and in some cases of muscular rheumatism, lumbago, &c. It acted well on the acute form, and in some instances very rapidly and energetically. It has no influence over relapses or endocardial complications. (*Nouv. Remèdes*, Sept.)

**Dr. Georgi**, of Görlitz, has administered salol in about forty cases of disease. This aromatic derivative is almost insoluble in the gastric juice, but is split up in the intestinal canal into its two components (phenol and salicylic acid), which are then eliminated as phenol-sulphuric acid and salicyluric acid.

The salol was given in powder, washed down with a little water; or tabloids would be a convenient form. It makes a very efficient deodorising and disinfectant mouth-wash. No unpleasant effects on the stomach were observed, nor upon the nervous system. Dose, 0.5—2 grammes; not exceeding 6 grammes per day. The urine fluoresces olive-green, and in thin layers has a yellow tinge. After large doses the urine darkens like carbolic urine. Large doses act best as an antipyretic, and the maximum effect is obtained within four to five hours. He especially recommends it in acute rheumatism. (*Berl. klin. Woch.*, 9, 10, 11, 1887.)

**Ewald** has ingeniously utilised salol in order to gain information as to the movements of the stomach in relation to the time

in which the contents of this organ are sent on into the intestine. Salol, on reaching the bowels, immediately dissolves, and shows almost instantly in the urine as salicyluric acid. This easily yields a red precipitate with chloride of iron. This re-action will show almost exactly the moment of the entrance of food into the bowel. The urine of seven persons in sound health showed the re-action to take place mostly within three-quarters of an hour, rarely within half an hour. It took two to three hours in seven cases of "ektasia ventriculi," this disease being distinguished by loss of motor power in this organ. On applying the electric current to the abdomen, the re-action took place in normal cases a quarter of an hour sooner; in cases of enlargement of the stomach, half an hour sooner. This experiment says much in favour of this method of treatment, which is despised by so many physicians. (*Brit. Med. Journ.*)

For a mouth-wash the following formula is recommended :—

R	Salol...	...	...	1 part
	Spiritus	...	...	100 parts
	Tinct. Cocci	...	...	3 „
	Ol. rosæ	...	...	mi.
	Ol. menth. pip.	...	...	mii.
M	A teaspoonful to be added to a glass of water.			

(*Therap. Monatshefte*, Jan., 1887.)

14. In addition to salol, other antipyretics have engaged attention, especially *antipyrin* and *antifebrin*. The latter drug appears to possess certain advantages which entitle it to more extended trial. The action of this drug in reducing temperature is most certain, and it never fails to lower it by several degrees. In a second paper by **Cahn** and **Hepp**, its introducers (*Berl. klin. Woch.*, 1, 2, 1887), they point out that it is four times as strong as antipyrin in its effects, is very cheap, does not cause vomiting, and rarely causes any rigors as the temperature subsequently rises again. Moreover, it causes no cerebral disturbance, and the appetite even improves under its use. In a few cases some degree of cyanosis of the face and limbs was observed; this, however, always disappeared (without any symptoms of shivering as it faded off), and the authors paid very little attention to it. (*Brit. Med. Journ.*, Feb. 12, 1887.)

Qualities other than antipyretic are likewise attributed to these drugs. Evidence is rapidly accumulating, pointing to the conclusion that in antipyrin we have a remedy which is of real use in the treatment of various painful affections, especially those



which are of a so-called "nervous character." Attention was recently directed, in these columns, by **Dr. John Ogilvy**, Surgeon-General, to the good results obtained by the use of antipyrin in an affection to which he applied the term "bilious headache." **Professor Germain Sée** had previously stated that the drug was useful in facial neuralgia, migraine, headache, sciatica, and neuritis. In a paper read before the Neurological Society of New York (*Medical Record*, May 7th), **Dr. T. S. Robertson** stated that he had used antipyrin in no less than eighty cases of migraine, and that it had failed to give some relief in only eight. Professor Sée had one failure in six cases. In fifty-four of the cases treated by Dr. Robertson the favourable action of the drug was noticed in from thirty minutes to one hour; in fifteen other cases recourse had to be had to chloral, bromides, or other drugs, but it was not found necessary to give as large doses as usual. Observers differ a good deal as to the dose; **Dr. Ogilvy** gives 8 grains, and, if necessary, repeats the dose in an hour, until three or four doses have been taken, though two generally suffice. **Dr. Robertson** gives 20 grains in a little Vichy water, and repeats the dose in two hours if necessary; **Professor Sée** gives 45 grains to a drachm and a half daily, in doses of about 8 grains. The drug is very soluble in water, and **Professor Sée** states that it is sometimes advantageous to administer it by hypodermic injection. **Dr. A. McL. Hamilton** (*New York Med. Journ.* and *Therapeutic Gaz.*) states that he has found both this drug and antifebrin especially useful in angeio-spastic migraine with evidences of cutaneous anæmia, dilated pupils, and cold surface, the headache beginning in the morning. In several cases of *petit mal*, under the continued use of antipyrin or antifebrin the losses of consciousness became less frequent. In a case of maniacal excitement with moderate pyrexia (102° F.) due to exhaustion, 15 grains of antipyrin repeated twice produced refreshing sleep and a subsidence of excitement. In the insomnia of pyrexia due to general disease, both drugs are, in his opinion, of great value. Cerebral anæmia appears to be the main indication for the use of either of these drugs as sedatives or hypnotics. (*Brit. Med. Journ.*, Sept. 3, 1887.)

Additional testimony in favour of antifebrin is adduced by **Drs. Murray and Cunningham** (*Brit. Med. Journ.*, April 23, 1887). As to the behaviour of acetanilide (antifebrin) in the organism, part of it appears to pass unchanged through the body; some, perhaps, goes out in conjugation with sulphuric acid, but the subject is not yet fully worked out. (**Cahn and Hepp**.) The army of antipyretics which is invading us has lately been increased by two new recruits, upon which we have but scanty information,

viz., *antithermin* (phenyl-hydrazinlevulinic acid) and *acetyl-amidophenol*, not yet re-baptised.

15. *Thallin*.—**Professor Ehrlich**, who has had very good results from thallin in typhoid fever, has had the candour to report a case (*Münch. med. Wochens.*, No. viii.) which ended fatally under repeated progressive doses—namely, 0·08 up to 0·58 gramme (one and a quarter grains to nine grains nearly)—of thallin tartrate. The necropsy showed the lesions of typhoid fever in the healing stage, cardiac hypertrophy and dilatation, fresh mitral endocarditis, and hæmorrhagic infarcts in the renal papillæ, the last-mentioned being, as shown by experiment, a characteristic sign of thallin-poisoning. Ehrlich assumes that the cardiac condition caused defective excretion and consequent accumulation of thallin. This danger may be completely avoided by fixing as the maximum dose for hourly administration 0·2 gramme of the tartrate (3 grains). In the progressive administration of thallin very small doses are used at first—namely, 0·07 or 0·08 gramme—and this amount is increased daily by  $\frac{1}{100}$  gramme. Heart-failure of any kind is a contra-indication of thallin treatment; so are the various forms of kidney disease, and also cases which resist the influence of small doses. (*Brit. Med. Journ.*, April 9, 1887.)

16. *Urethan*.—**Dr. A. P. Langovoi**, of Moscow, gives (*Vratch*, No. 7, p. 179, 1887) the following summary of the results of his own experiments on the physiological and therapeutic effects of urethan. 1. The hypnotic effect of urethan manifests itself in different kinds of animals in different degrees. Thus it produced a powerful effect on rabbits, while it acted very slightly on dogs. 2. Even large doses of urethan had not any marked poisonous effect on the heart, nor did they depress the arterial tension. 3. Breathing is quickened by urethan. 4. The drug is well borne by patients, has not a disagreeable taste, and does not cause any gastric disturbance. 5. Given in ordinary medicinal doses, urethan does not produce any unpleasant secondary effects, such as failure of the cardiac action, &c. 6. Its chief effect is on the brain; it does not seem to act on the peripheral nervous system. At all events, in cases of sleeplessness from cough or pains it has no marked effect. 7. Urethan is not a powerful hypnotic, and in certain cases it is inactive, or nearly so. Nevertheless, as it has no tendency to produce any untoward secondary effects, it may be regarded as a fairly useful addition to our therapeutical resources. It is a useful hypnotic in nervous insomnia, as well as in sleeplessness in the course of acute fevers. (*Brit. Med. Journ.*, March 19, 1887.)

Similar experiments have been made with the compounds analogous to urethan, the recently-introduced hypnotic, which, it will be remembered, is a combination of carbaminic acid with an ethyl residue. **Professor Riegel** has used in his clinic at Giessen methyl-urethan, ethylidene-urethan, and chloral-urethan, the last-mentioned being a product of the direct combination of chloral with ethyl-urethan. He reports (*Pharm. Zeit.*, p. 351, Sept. 8) that both methyl-urethan and ethylidene-urethan are devoid of hypnotic properties, and that chloral-urethan presents no advantages over the ordinary ethyl-urethan. It may be mentioned here, also, that in experimenting on animals **M. Coze** has found urethan to be an effective antidote to strychnine, not only suppressing the tetanic symptoms, but preserving the life of the animal after receiving many times more than a lethal dose. Whether urethan in such a case acts as an antispasmodic, and whether it could be used with advantage in tetanus, are points not yet decided. (*Pharm. Journ.*, Oct. 2, 1886.)



# INDEX TO AUTHORS QUOTED.



- Abadie, 280, 284.  
 Abbe, 154.  
 Abercrombie, 125.  
 Adami, 319.  
 Adams, 122, 178.  
 Aducco, 319.  
 Anderer, 140.  
 Anderson, 178.  
 Andrews, J. B., 54.  
 Andrews, James, 83.  
 Angagneur, 166.  
 Angerer, 170.  
 Annandale, 148.  
 Apostoli, 232.  
 Atkinson, 62.  
 Auer, 85.  
 Auward, 254.  
  
 Baginsky, 125.  
 Baker, H. F., 186.  
 Baker, M., 151.  
 Baker, W. H., 295.  
 Ball, M., 39.  
 Balzer, 215.  
 Baracz, 294.  
 Barbour, 250.  
 Barling, 174.  
 Barlow, 123.  
 Barr, 125, 135, 294.  
 Barthel, 117.  
 Barthez, 125.  
 Barwell, 176, 182, 183.  
 Basil, 42, 168.  
 Baudelocque, 247.  
 Bayer, 311.  
 Beaumetz, 31, 40, 70, 91, 129, 135.  
 Beck, 137.  
 Beckurts, 316.  
 Benissowitsch, 167.  
 Bennett, 30.  
 Bergeon, 29.  
 Bernays, 165.  
 Bernbeck, 271.  
 Bero, 135.  
 Beschorner, 19.  
 Besnie, 266, 269.  
 Betz, 79, 304.  
 Bidder, 266.  
 Bidentkap, 211.  
 Bielschowski, 97, 320.  
 Bircher, 295.  
 Bishop, S. S., 292, 295, 296.  
  
 Blackburn, 179.  
 Blanc, 244, 247, 249.  
 Blocq, 50.  
 Boecker, 309.  
 Boehm, 208.  
 Boerner, 224.  
 Bohn, 263.  
 Bois, 244.  
 Bonamy, 133.  
 Bond, 67, 199.  
 Bondesen, 147.  
 Bornemann, 277.  
 Bosse, 141.  
 Bouchard, 128.  
 Bouveret, 39.  
 Boxall, 259.  
 Bradford, 182.  
 Braun, 236.  
 Broadbent, 10.  
 Brocq, 268, 270.  
 Brondel, 133.  
 Brondel, A., 116.  
 Bronner, 11.  
 Brooke, 263, 268, 269.  
 Brown, 120.  
 Brown, Dillon, 306.  
 Browne, Buckstone, 199.  
 Browne, Lennox, 303.  
 Bruce, 86, 316.  
 Bruen, 31.  
 Bruns, 184.  
 Bryant, 149.  
 Buckmaster, 309.  
 Budd, 9.  
 Budin, 256.  
 Burnett, 296.  
 Burnie, 131.  
 Burschinski, 273.  
 Butte, 259.  
 Byers, 125.  
  
 Cadier, 30.  
 Cahn, 135, 321, 322.  
 Caliborne, 54.  
 Callias, 273.  
 Calmels, 313.  
 Campe, 238.  
 Cane, 185.  
 Carmichael, 125.  
 Carter, 95, 104.  
 Caspary, 210.  
 Cauldwell, 37.  
  
 Champneys, 252, 261.  
 Chandelux, 207.  
 Chapin, 125.  
 Charles, 260.  
 Charpeutier, 242.  
 Chazan, 245.  
 Cheadle, 125.  
 Caéron, 71.  
 Cheyne, 134.  
 Chiari, 143.  
 Cnodin, 285.  
 Churchill, 171.  
 Clarborne, 316.  
 Clark, Sir Andrew, 1, 68, 312.  
 Clark, H. E., 205.  
 Clarke, 223.  
 Classen, 262.  
 Clement, 99, 242.  
 Cohen, 31, 135, 311.  
 Cohn, 129.  
 Coiquard, 90.  
 Colley, 179.  
 Colpelli, 185.  
 Combemale, 54.  
 Combes, 310.  
 Comby, 151.  
 Costa, Da, 10, 13, 23.  
 Cotterill, 179.  
 Cousins, 205.  
 Coze, 324.  
 Crede, 252.  
 Creighton, 41.  
 Cripps, 267.  
 Crittenden, 90.  
 Crocker, 265.  
 Crook, 106.  
 Croom, 260.  
 Cunningham, 322.  
 Cutler, 318.  
 Cutter, 234.  
  
 Da Costa, 10, 13, 23.  
 Dakin, 258.  
 Davis, 99.  
 Day, 125.  
 Debove, 58.  
 Dehenue, 284.  
 Dehio, 71.  
 Delthill, 130.  
 Dennis, 186.  
 Dentu, 167.  
 Dercum, 49.  
 Descraizilles, 118.  
 Descormes, 283.  
  
 De Soyre, 242, 248.  
 Dessau, 117.  
 Dittel, 200.  
 Dobradin, 82.  
 Dohrn, 223, 251.  
 Doléris, 259.  
 Donovan, 97.  
 Doutrelepont, 311.  
 Doyon, 209.  
 Dreschfeld, 18, 319.  
 Drestanche, 298.  
 Driver, 246.  
 Drobeck, 153.  
 Drysdale, 212.  
 Duckworth, Sir Dyce, 103, 262.  
 Ducray, 262.  
 Duhrssen, 256.  
 Dukes, 114.  
 Duncan, Mathews, 243.  
 Duncan, W. A., 245.  
 Dunlap, 274.  
  
 Eccles, 46.  
 Edington, 114.  
 Edwards, 67.  
 Ehrlich, 323.  
 Eisenhart, 99, 135.  
 Eitelberg, 297, 305.  
 Elder, 234.  
 Ellis, 180.  
 Engelmann, 233.  
 Epstein, 118.  
 Escherich, 123.  
 Esmerch, 170.  
 Estrées, 105.  
 Eulenburg, 282.  
 Ewald, 57, 71, 320.  
 Ewart, 44.  
  
 Faie, 166.  
 Febling, 252.  
 Feilchenfeld, 320.  
 Fenwick, 88, 207.  
 Ferrari, 213.  
 Ferreira, 23, 114.  
 Filehne, 314.  
 Fillenbaum, 143.  
 Fischer, 319.  
 Flint, 90.  
 Flückiger, 315.  
 Forchheimer, 123.  
 Fournier, 267, 270.  
 Fraenkel, 303, 310.

- Fraentzel, 40.  
 Fränkel, 98, 99, 100,  
 135, 143, 273.  
 Franvel, 126.  
 Fraser, 8, 9, 60.  
 Frey, 3, 143, 217.  
 Friedlander, 138.  
 Fritsch, 236.  
 Fulton, 179.  
 Fux, 143.  
  
 Gadd, 75.  
 Gallenga, 285.  
 Georgi, 36, 98, 140,  
 320.  
 Gibbons, 261.  
 Gibney, 182, 184—  
 186.  
 Gillon, 199.  
 Glax, 127.  
 Glazinski, 59.  
 Gley, 279.  
 Godlee, 159.  
 Goelet, 120.  
 Goodhart, 160.  
 Gould, 153.  
 Green, 116.  
 Griffith, 33.  
 Gross, 146.  
 Grüneberg, 128, 135.  
 Guaita, 287.  
 Gubler, 82.  
 Guelpa, 132.  
 Gusserow, 226.  
 Guttman, 272, 317.  
 Guyard, 271.  
  
 Hagen, 304.  
 Hamilton, 322.  
 Hance, 305.  
 Hardy, 313.  
 Harley, 63—65.  
 Harrison, 204.  
 Hart, 251.  
 Hartmann, 290.  
 Hase, 125.  
 Haslund, 267.  
 Hassall, 33.  
 Hasterlik, 123.  
 Hausmann, 38, 75.  
 Hayem, 120.  
 Heath, 204.  
 Hegar, 221.  
 Heidenhain, 138.  
 Heinzelmann, 135.  
 Heiss, 67.  
 Henry, 106.  
 Hepp, 135, 321, 322.  
 Hering, 306.  
 Herrlich, 97, 98, 320.  
 Heubner, 131.  
 Heymann, 304.  
 Heyn, 138.  
 Hiusberg, 127.  
 Hirschberg, 47.  
 Hoffmann, 143.  
 Hofmohl, 225.  
 Holloway, 116.  
 Holmes, 204.  
  
 Holmes, Timothy,  
 17.  
 Holroyd, 10.  
 Holst, 85.  
 Holt, 119, 125.  
 Homans, 232.  
 Houchard, 66.  
 Huber, 135.  
 Hulke, 154.  
 Hume, 199.  
 Hutchison, 9.  
 Hutton, 141.  
  
 Illingworth, 23, 115.  
 Immermann, 43, 10.  
 Irving, 131.  
  
 Jacobi, 27, 115.  
 Jackson, 33, 274.  
 Jacobson, 295.  
 Jacobson, Sen., 282.  
 Jacoby, 53.  
 Jacquod, 129.  
 Jakulowitseh, 196.  
 Jamieson, 114.  
 Jarvis, 309.  
 Jennings, 305.  
 Jessop, 288.  
 Jones, 181.  
 Jourdomet, 42.  
 Judson, 178.  
 Julien, 272.  
  
 Kaposi, 208.  
 Kapperger, 130.  
 Ka-anli, 158.  
 Kast, 127.  
 Keen, 168.  
 Kellogg, 112, 308.  
 Kelly, 65.  
 Keyes, 200, 205.  
 King, 250.  
 Kingsbury, 88.  
 Kinnicutt, 25.  
 Kirsten, 277.  
 Kleefeld, 97.  
 Knaggs, 226, 274.  
 Knies, 287.  
 Knoche, 275.  
 Kobel, 144.  
 Kobert, 7, 98.  
 Koenig, 224.  
 Kohler, 127.  
 Kohts, 113.  
 Kollock, 167.  
 Kolz, 241.  
 Konig, 149.  
 Koppe, 247.  
 Korxounow, 82.  
 Kovacz, 20.  
 Kraske, 262.  
 Kraus, 121.  
 Krause, 65, 306.  
 Krauss, 173.  
 Krenganskis, 36.  
 Kretschmann, 297.  
 Kreutzmann, 142.  
 Krieger, 135.  
 Krohne, 179.  
 Krünlein, 71, 139.  
  
 Kummell, 169.  
 Kunze, 98.  
 Kynsey, 108.  
  
 Landerer, 185.  
 Lang, 179.  
 Lange, 311.  
 Langgaard, 11, 12.  
 Langovoi, 323.  
 Lantz, 215.  
 Lashkevitch, 15.  
 Lassar, 263, 269.  
 Lax, 115, 133.  
 Lazarus, 19.  
 Leech, 11, 13, 14.  
 Le Deutu, 167.  
 Leloir, 270.  
 Lentovsky, 85.  
 Lépine, 52, 135.  
 Leubuscher, 69.  
 Levinstein, 319.  
 Lewentauer, 115, 213.  
 Lewin, 71.  
 Leyden, 5.  
 Liebenstein, 4.  
 Liebreich, 278, 317.  
 Lindfors, 224.  
 Lipp, 211.  
 Lombard, 120.  
 Loomis, 24.  
 Lorey, 118.  
 Löwenberg, 299.  
 Löwenthal, 65.  
 Lubinski, 19.  
 Lublinski, 306, 318.  
 Lucae, 295, 297.  
 Lucke, 164, 168.  
 Lucy, 179.  
 Lunin, 120.  
 Lustgarten, 143, 275.  
  
 MacCormac, Sir  
 William, 165, 203.  
 Macewen, 294.  
 Mackenzie, J. N.,  
 303, 311.  
 Mackenzie, Sir  
 Morell, 303.  
 Mackenzie, Stephen,  
 50.  
 Macleod, 143.  
 Madelung, 169, 186.  
 Maguire, 1.  
 Major, 306.  
 Maklakoff, 280.  
 Maloney, 300.  
 Mandelbaum, 216.  
 Maragliano, 112.  
 Marsh, 151, 179.  
 Marshall, Lewis, 121.  
 Marshall, 152.  
 Marten, 62.  
 Martin, 264.  
 Martin, A., 237, 238.  
 Martin, Sidney, 120.  
 Martindale, 319.  
 Martineau, 89.  
 Masini, 282.  
 Mathieu, 53.  
 Mayde, 170.  
  
 Mayo, 127.  
 Mazza, 235.  
 Mazzoni, 137.  
 McBride, 299, 304.  
 McKeown, 283, 293.  
 Mendelsohn, 15.  
 Meinert, 243.  
 Mering, 85.  
 Metcalfe, 102.  
 Meyer, 273.  
 Michael, 116, 304.  
 Michel, 309.  
 Mickulicz, 170.  
 Miculicz, 144.  
 Mills, 16.  
 Milner, 209.  
 Miot, 290, 299.  
 Misrachi, 253.  
 Mitchell, 48.  
 Moldenhauer, 303.  
 Mollière, 185.  
 Moloney, 132.  
 Money, 122, 125.  
 Monnier, 172.  
 Montanelli, 283.  
 Montg mery, 305.  
 Morel, 33.  
 Moritz, 117.  
 Morris, 156.  
 Morse, 157.  
 Morton, 28.  
 Mosler, 19.  
 Mosso, 315, 319.  
 Muirhead, 20.  
 Munk, 92.  
 Muriel, 54.  
 Murray, 322.  
 Myers, 109.  
 Mylius, 278.  
  
 Naumann, 224.  
 Neale, 28, 198.  
 Nesteroff, 36.  
 Newman, 18.  
 Niemeyer, 82.  
 Noquet, 294.  
 Norderling, 70.  
 Northrup, 305.  
 Nothnagel, 79, 110.  
 Nussbaum, 263.  
  
 Odent, 129.  
 O'Dwyer, 134.  
 Oertel, 5, 82.  
 Ogilvy, 52.  
 Ogston, 53.  
 Oliver, 5, 108, 322.  
 Orrenburg, 126.  
 Osler, 106.  
 Owen, 175, 194.  
  
 Pajot, 250, 255.  
 Palasne, 267.  
 Palmer, 206.  
 Parker, 121, 178, 186.  
 Patein, 140.  
 Paul, 315.  
 Pécharde, 39.  
 Pécholier, 129.  
 Pekelharing, 108.

- Péligot, 319.  
 Pepper, 33.  
 Perier, 140.  
 Petersen, 59.  
 Peyrot, 152.  
 Pfeiffer, 317.  
 Philbert, 93.  
 Philippson, 172.  
 Pick, 277, 318.  
 Pierce, 290.  
 Pinard, 245.  
 Pitt, 2.  
 Playfair, 47.  
 Playfair, W. S., 260.  
 Posadsky, 26.  
 Poten, 138, 223.  
 Pousson, 200.  
 Pozzi, 167.  
 Prévost, 29.  
 Prince, 270.  
 Profanter, 229.  
 Queirel, 242.  
 Rabagliati, 204.  
 Raison, 53.  
 Ralfe, 93.  
 Ransohoff, 154.  
 Ransome, 31, 38.  
 Ravogli, 269.  
 Reibmayer, 229.  
 Reichmann, 58, 60.  
 Reid, 143.  
 Reid, I., 279.  
 Reid, J., 53, 316.  
 Reihlen, 255.  
 Rennie, 66.  
 Resch, 228.  
 Rewentauer, 129.  
 Reynolds, 141.  
 Richardson, 109.  
 Riegel, 61, 324.  
 Riess, 63, 117, 122, 135.  
 Rilliet, 125.  
 Rinne, 143.  
 Ripley, 26, 117.  
 Ritter, 317.  
 Roberts, 177, 186.  
 Robertson, T. S., 322.  
 Robinson, 3, 25.  
 Robson, 197.  
 Rochelt, 158.  
 Roe, 312.  
 Rondeau, 279.  
 Roosa, 296.  
 Roose, 130.  
 Rosenberg, 97, 306.  
 Roser, 45.  
 Rothe, 115.  
 Rovsing, 138.  
 Ruanelt, 30.  
 Runge, 260.  
 Rutgers, 257.  
 Ruyter, 138.  
 Rydygier, 169, 174.  
 Saerbs, 266.  
 Sahli, 95.  
 Sajous, 306.  
 Sängcr, 252.  
 Sanson, 7.  
 Saundby, 88.  
 Savisan, 242.  
 Sawyer, 63.  
 Sayre, 186.  
 Schachmann, 272.  
 Schadewald, 19.  
 Schaeffer, 307.  
 Schenker, 116, 130.  
 Schildback, 182, 185.  
 Schirmunski, 297.  
 Schmidt, 306.  
 Schmitz, 191.  
 Schott, 4.  
 Schreiber, 141.  
 Schroeder, 11, 12.  
 Schrotter, 333.  
 Schubert, 298.  
 Schuchardt, 164.  
 Schülz, 110.  
 Schumacher, 305.  
 Schussler, 153.  
 Schustler, 142.  
 Schwartz, 297.  
 Schwarz, 223.  
 Schweninger, 102, 265.  
 Sebelean, 152.  
 Sée, 51, 322.  
 Sehrwald, 308.  
 Seibert, 119.  
 Seifert, 140, 304.  
 Seiffert, 137.  
 Seiss, 291.  
 Semmola, 78, 82, 127.  
 Senator, 73, 82, 98.  
 Seseman, 179.  
 Sexton, 291, 295.  
 Shadck, 214.  
 Shaffer, 172.  
 Shuttuck, 33.  
 Sievers, 57.  
 Simon, 125, 217.  
 Slater, 108.  
 Smith, 27.  
 Smith, A. H., 16.  
 Smith, Boyes, 64.  
 Smith, Lewis, 115, 133.  
 Smith, Shingleton, 155, 187, 306.  
 Smith, Turnbull, 124.  
 Sommerbrodt, 41, 305.  
 Southam, 199.  
 Soyre, 242, 248.  
 Stalssel, 13.  
 Stärker, 123.  
 Statz, 32.  
 Steaven-on, 92.  
 Steell, 2.  
 Steffen, 113.  
 Stembo, 131.  
 Stepanoff, 217.  
 Stewart, 81.  
 Stiller, 14.  
 Stillman, 182.  
 Stockman, 314.  
 Stocquart, 303.  
 Stoerk, 134, 304, 303, 310.  
 Stoukowsenow, 215.  
 Stowers, 268.  
 Strubing, 110.  
 Strumpff, 132.  
 Sturges, 122, 125.  
 Stutzer, 319.  
 Suckling, 16, 52.  
 Sutton, 231.  
 Swain, 304.  
 Symonds, 163.  
 Szabo, 259.  
 Szadek, 215.  
 Tafel, 319.  
 Tait, 230.  
 Takaki, 107.  
 Tanner, 316.  
 Tarnowsky, 214.  
 Tarssaidc, 283.  
 Tauber, 150.  
 Taylor, 100, 185.  
 Tentschinsky, 135.  
 Terray, 15.  
 Terrier, 178.  
 Terillon, 152.  
 Thomas, 272.  
 Thompson, Sir Henry, 198.  
 Thornton, 230.  
 Tilanus, 134.  
 Tirard, 83.  
 Tomkins, 119.  
 Toporoff, 317.  
 Tourette, 50.  
 Toussaint, 121.  
 Travers, 96.  
 Treves, 138.  
 Trinkright, 27.  
 Turner, 67.  
 Tweedy, 317.  
 Tyson, 93.  
 Uckermann, 299.  
 Ungar, 52.  
 Unna, 121, 273, 275.  
 Urwitsch, 257.  
 Vacher, 235, 283.  
 Valenzuela, 127.  
 Varnier, 245.  
 Velden, 61.  
 Verneuil, 161, 136.  
 Vetlesen, 117.  
 Vidal, 266.  
 Viciars, 90.  
 Vill-min, 83.  
 Villettc, 108.  
 Vincent, 242.  
 Vogel, 125.  
 Vogelsang, 131, 272.  
 Voigt, 12.  
 Volkmann, 237.  
 Voltolini, 309.  
 Von Szadek, 215.  
 Wagner, 170.  
 Wahl, 141.  
 Waldo, 187, 306.  
 Walsham, 192, 204.  
 Watson, 15.  
 Webb, 234.  
 Webber, 316.  
 Wehmer, 234.  
 Weill, 135.  
 Weinlechner, 298.  
 Weinst-in, 15, 303.  
 Weir, 203.  
 Wells, Sir Spencer, 223.  
 Westbrook, 44.  
 Wetherill, H., Jun., 54.  
 Whitehead, 161.  
 Whitehead, Walter, 190, 202.  
 Wickerkiewicz, 283.  
 Widowitz, 114, 120, 135.  
 Wiederhofer, 125.  
 Wight, 151.  
 Willett, 64, 204.  
 Williams, C. T., 39, 40.  
 Williams, J., 236.  
 Winkler, 103.  
 Winter, 251.  
 Win'raub, 108.  
 Woakes, 303.  
 Wohlberg, 125.  
 Wolfenden, 303, 307, 318.  
 Wölflcr, 142.  
 Wood, 35.  
 Wood, H. C., 31.  
 Wood, Prof., 316.  
 Wood, R., 315.  
 Woronichin, 115.  
 Wulfsberg, 317.  
 Yeo, 30, 103.  
 Young, 66.  
 Zeisler, 274.  
 Ziem, 310.  
 Ziemss-n, 100, 111.  
 Zinis, 117.



# INDEX TO SUBJECTS.

	PAGE
Abortion, retention of placenta after, Treatment of ... ..	256
Abscess, psoas, Treatment of ... ..	175
Absorption of mercury by the skin ... ..	213
Acetphenitidine as an antithermic agent ... ..	127
Acne, Treatment of ... ..	269
Active principle of strophanthus ... ..	8
Acute pneumonia ... ..	117
Adonidine in dilated heart ... ..	13
Albuminuria, Diet in ... ..	81
Alcoholism producing acute dilatation of the heart ... ..	1
Alopecia areata, Treatment of ... ..	272
Ammoniacal urine ... ..	85
Amputation, A new osteo-plastic, of the foot ... ..	150
— at the knee-joint ... ..	149
— in diabetes ... ..	149
Anæmia and chlorosis, Treatment of ... ..	109
—, Spleen pulp in ... ..	112
Anæsthetics ... ..	141
—, Local ... ..	142, 303
Analgesics, Local ... ..	53
Aneurysm, abdominal, Treatment of, by Loreta's method ... ..	156
—, Pressure of, upon vagus ... ..	18
—, Thoracic ... ..	16
—, Treatment of ... ..	17
Aneurysms, internal, Surgical treat- ment of ... ..	153
Ani, Atresia ... ..	196
Aniline in phthisis ... ..	36
Anodynes, Antipyrin and antifibrin as ... ..	51
Antifibrin and antipyrin as anodynes ... ..	51
Antifebrin in phthisis ... ..	37
— in rheumatism ... ..	99
—, Treatment of typhoid fever by ... ..	128
Antipyretic re agents in fevers ... ..	126
Antipyrin and antifibrin as anodynes ... ..	51
— and calomel in croupous pneu- monia ... ..	26
— in rheumatism ... ..	99
— in the treatment of ulcers ... ..	141
Antiseptic, Is iodoform an? ... ..	138
Antithermic action of nitrogen in- halation ... ..	127
— agent, Acetphenitidine as an ... ..	127
Antrum of Highmore, Disease of, as a cause of nasal symptoms ... ..	310
— —, Empyema of ... ..	144
Anus, Imperforate ... ..	197
Aortic disease, Digitalis in ... ..	7

	PAGE
Apparatus, new, Treatment of talipes equinus by ... ..	172
Arsenic and lithium in diabetes ... ..	89
— in Bath waters ... ..	102
— in the treatment of malignant tumours ... ..	141
—, local applications of, Treatment of diphtheria by ... ..	132
Artery, inferior thyroid, Ligature of ... ..	153
Articular rheumatism, Chronic ... ..	100
Ascarides ... ..	120
Ascites, Treatment of ... ..	70
Asthma, Cocaine in ... ..	19
—, Faradisation of trigeminal nerves in ... ..	19
—, Hydrate of terpine in ... ..	19
—, Iodide of potassium and chloral in ... ..	19
Atresia ani ... ..	196
Atropin, Subcutaneous use of, in hæ- moptysis ... ..	38
Aural catarrh, chronic, New method of treating ... ..	291
— furuncle ... ..	299
Basedow's disease, Malarial affection stimulating ... ..	16
Bath waters, Arsenic in ... ..	102
Belladonna and opium in diabetes ... ..	88
Beri-beri ... ..	106
Beverages, Influence of, on digestion ... ..	60
Bismuth, Sub-iodide of, for wounds ... ..	141
Bites, Insect ... ..	271
Bladder, Rupture of ... ..	203
—, Tumours of ... ..	198
Blood, Effusion of, into the knee- joint ... ..	147
— injection, Subcutaneous, and saline transfusion ... ..	111
Boils and carbuncles, Treatment of ... ..	266
Bone-grafting ... ..	152
Boracic acid for sterilising the urine ... ..	206
Bow-legs and knock-knee, Treatment of ... ..	186
Brain, Abscess of, from ear disease ... ..	294
Breast, Sarcoma of ... ..	146
Breech presentations, External ver- sion in ... ..	250
Bronchi and trachea, Local treatment of ... ..	307
Bronchitis ... ..	117
—, acute, Treatment of ... ..	20
— and pneumonia, Iron in ... ..	23

	PAGE		PAGE
Bronchitis, foetid, Oil of sandal wood	23	Cocaine in diseases of the ear ...	296
in... ..	117	— in skin diseases ...	275
Broncho-pneumonia ... ..	23	Colchicum in gout ... ..	104
Bronchorrhœa and other lung affec-	249	Condurango bark in cancer of the	63
tions, terpene in ... ..	252	stomach ... ..	76
Brow presentations ... ..	11	Congenital dislocation of the hip,	217
Cæsarean section, The improved ...	133	Treatment of ... ..	284
Caffeine ... ..	93	— syphilis, infantile, Treatment of	283
Calcium, sulphide of, and benzoate of	26	Conical cornea, New treatment of ...	68
soda, Treatment of diphtheria by	14	Constipation ... ..	69
Calculus, Renal ... ..	215	—, chronic, Electricity and massage	123
Calomel and antipyrin in croupous	284	in... ..	284
pneumonia ... ..	236	Convulsions, Infantile ... ..	258
— as a diuretic in heart disease ...	50	in women, The risks of ... ..	132
—, subcutaneous injections of,	131	—, inhalations of, Treatment of	139
Treatment of syphilis by ... ..	266	diphtheria by ... ..	140
Cancer of the stomach, Condurango	15	— in surgery ... ..	66
bark in... ..	2	—, Preparation of solutions of	40
— of the uterus, Harveian lectures	309	Coto bark in diarrhœa ... ..	303
on ... ..	234	Creosote in pulmonary tubercle ...	26
Cannabis indica in continuous head-	285	Cricoid cartilage, Removal of the ...	181
ache ... ..	291	Croupous pneumonia, Antipyrin and	185
Carbolic acid and iron, Treatment of	205	calomel in ... ..	244
diphtheria by ... ..	207	Curvature, lateral, of the spine, Treat-	199
— — injections into the tonsils,	211	ment of... ..	290
Treatment of diphtheria by ...	291	Deformity of the great toe, Treatment	179
Carbuncles and boils, Treatment of	303	of... ..	251
Carcinoma of the temporal bone ...	211	Delivery, Should there be an interval	114
Cardiac cases, Cyanide of zinc in ...	205	between turning and? ... ..	149
— dilatation at puberty in girls ...	10	Dentition fever ... ..	89
— stimulant, Cocaine as a ... ..	309	Diabetes, Amputation in ... ..	90
Cartilage, cricoid, Removal of the ...	234	—, Arsenic and lithium in ... ..	243
Castration and myotomy in fib-	285	—, Diet in ... ..	88
roids ... ..	291	— insipidus in pregnancy ... ..	86
Cataract, Removal of remains of, after	15	—, Jambûl in ... ..	88
operation by injection ... ..	285	—, Morphine in ... ..	88
Catarrh, chronic aural, New method	291	—, Opium and belladonna in ...	67
of treating ... ..	303	Diarrhœa ... ..	66
Catarrhal affections, Peroxide of	211	—, Coto bark in... ..	119
hydrogen in ... ..	205	—, Summer ... ..	66
— jaundice ... ..	205	—, Tropical ... ..	81
Catheter, capillary, Retention of urine	119	Diet in albuminuria ... ..	90
treated by aspiration through ...	19	— in diabetes ... ..	265
Catheterisation of the ureters... ..	109	Dietetics in eczema ... ..	59
Childhood, early, Acute gastritis in...	110	Digestion, Duration of ... ..	60
Chloral and iodide of potassium in	242	—, Influence of beverages on ...	75
asthma ... ..	122	Digestive organs, diseases of, Grape	7
Chloroform narcosis, Puncture of the	255	cure in ... ..	7
heart in... ..	110	Digitalis as a diuretic ... ..	13
Chlorosis and anæmia, Treatment of	171, 186	— in aortic disease ... ..	56
—, Sulphur in ... ..	172	— in comparison with sparte ne ...	161
Cholera in pregnancy ... ..	173	Dilatation of stomach ... ..	115
Chorea ... ..	172	—, Treatment of hæmorrhoids by ...	36
Chorion, retained, Treatment of ...	172	Diphtheria ... ..	134
Circulation, diseases of, The value of	10	— and phthisis, Salol in ... ..	
Turkish baths in ... ..	3	—, Intubation of the larynx in ...	
Club-foot, Treatment of... ..	171, 186		
—, —, by Phelps's open incision...	172		
—, —, by re-section of the tarsal	173		
bones ... ..	172		
—, Use of traction in the treat-	172		
ment of... ..	10		
Cocaine as a cardiac stimulant ...	216		
— for the prevention of the pain	19		
attendant on hypodermic injec-			
tions ... ..			
— in asthma ... ..			

	PAGE
Diphtheria, Treatment of, by benzoate of soda and sulphide of calcium ... ..	133
—, —, by carbolic-acid injections into the tonsils ... ..	131
—, —, by early tracheotomy ... ..	134
—, —, by inhalations of corrosive sublimate ... ..	132
—, —, by inhalations of eucalyptus ... ..	133
—, —, by injection of perchloride of iron ... ..	132
—, —, by iodol ... ..	131
—, —, by iron and carbolic acid ... ..	131
—, —, by local applications of arsenic ... ..	132
—, —, by oil of turpentine ... ..	129
—, —, by oxygenated water ... ..	131
—, —, by pilocarpine ... ..	133
—, —, by sulphite of magnesia ... ..	131
—, —, by turpentine and gas tar... ..	130
Diseases, various, Laparotomies for ... ..	232
Dislocations, shoulder, Reduction of ... ..	148
Diuresis ... ..	92
Diuretic, Digitalis as a ... ..	7
Dolorosus, Hallux ... ..	179
Dorsal displacement of the arm, Dystocia from ... ..	250
Douching, The risks of corrosive sublimate, in lying-in women ... ..	258
Dressing, Tannin as ... ..	141
Drinks, Influence on temperature in fevers ... ..	127
Drumine, Therapeutical action of ... ..	279
Dry hot air baths for syphilitic patients... ..	217
— treatment in gynecology; the remedies, etc... ..	238
Duration of digestion ... ..	59
Dysentery ... ..	66
Dyspepsia in infants ... ..	118
—, Neurotic ... ..	60
Dystocia from dorsal displacement of the arm... ..	250
Ear disease, Abscess of the brain from ... ..	294
—, diseases of, Cocaine in ... ..	296
—, disease of, Peroxide of hydrogen in ... ..	297
—, Foreign bodies in the ... ..	298
—, middle, Novel methods of treating diseases of ... ..	292
—, —, Suppuration of ... ..	290
—, Risk incurred by water entering the ... ..	291
“Écouvillonnage,” or brushing out, the uterus ... ..	256
Eczema, Dietetics in ... ..	265
—, obstinately-recurring, Treatment of ... ..	265
—, Treatment of ... ..	263
—, —, by pastes ... ..	264
— uterus, Treatment of ... ..	263
Electrical treatment ... ..	46
Electricity and massage in chronic constipation ... ..	69
—, Treatment of fibroid tumours of the uterus by ... ..	232

	PAGE
Electrolysis, Treatment of fibrous tumours of the naso-pharynx by ... ..	309
—, —, keloid by ... ..	270
Empyema of the antrum of Highmore ... ..	144
—, Treatment of, by perfusion ... ..	44
Emulsions, The use of ... ..	274
Enemata, Oxygen... ..	112
—, peptonised, Nutritive value of ... ..	71
Enucleation of submucous fibroids immediately after delivery ... ..	257
Enuresis ... ..	92
—, Nocturnal ... ..	121
Episcleral faradisation and galvanisation of the muscles of the eye ... ..	282
Erysipelas, Treatment of ... ..	262
Eserine, Treatment of detachment of the retina by ... ..	287
Eucalyptol, Injections of, in phthisis ... ..	39
Eucalyptus, inhalations of, Treatment of diphtheria by ... ..	133
Excision of the knee ... ..	151
—, Treatment of piles by ... ..	161
Exercise in heart disease ... ..	4
Exostosis, Removal of an ... ..	293
Extirpation, Total, of the cancerous uterus ... ..	236
—, vaginal total, of the cancerous uterus, Statistics of ... ..	237
Extraperitoneally, Hysteromyomiotomies treated ... ..	236
Eye, Episcleral faradisation and galvanisation of the muscles of the ... ..	282
—, Hot water in diseases of the ... ..	281
Face presentations, Interference in ..	248
Faradisation of trigeminal nerves in asthma ... ..	19
Fats and fatty acids in chronic wasting diseases ... ..	73
Fatty hernia ... ..	164
Feeding, Infant ... ..	121
Fever, Dentition ... ..	114
—, Hay ... ..	311
Fevers, acute, Glycerine in the treatment of... ..	127
—, Antipyretic re-agents in ... ..	126
—, Influence of drinks on temperature in ... ..	127
Fibroids, Myomotomy and castration in... ..	324
—, submucous, Enucleation of, immediately after delivery ... ..	257
Filaria sanguinis hominis ... ..	109
Fistulæ of the membrana tympani, Establishment of permanent ... ..	299
Flat-foot, Treatment of... ..	174
Flexus, Hallux ... ..	179
Fœtal head, how best guard the perineum while it is passing ... ..	251
Food and remedy, Milk as ... ..	58
Foot, A few osteo-plastic amputation of the ... ..	150
Foreign bodies in the ear ... ..	293
— body, large, Gastrotomy for ... ..	165
Fracture of the olecranon ... ..	153
Furuncle, Aural ... ..	299



	PAGE
Galactorrhœa ... ..	261
Galvanic treatment of uterine fibroids	234
Galvano-cautery for the membrana tympani ... ..	298
Gangrene caused by iodine collodion	272
Gas tar and turpentine, Treatment of diphtheria by ... ..	130
Gastralgia ... ..	63
Gastritis, Acute, in early childhood...	119
Gastrotomy for large foreign body ...	165
Gelatines, Medicated ... ..	275
Genital tuberculosis ... ..	221
Genito-urinary pharmacopœia, Therapeutic value of recent additions to ... ..	207
Glaucoma, Posterior ophthalmotomy in... ..	285
Glycerine in the treatment of acute fevers ... ..	127
Goitre dependent upon pregnancy ...	242
— treated by injection ... ..	151
Gonorrhœal rheumatism ... ..	100
Gout, Colchicum in ... ..	104
Gouty parotitis and gouty orchitis ...	105
Grafting, Bone- ... ..	152
—, Tendon- ... ..	152
G anu-l-r lids, Treatment of ... ..	283
Grape cure in diseases of the digestive organs ... ..	75
Gullet, Treatment of cancerous stricture of ... ..	163
Gunshot injury of joints ... ..	164
Gynecological operations, The uses of juniper catgut in ... ..	238
Gynecology, Dry treatment in; the remedies, etc. ... ..	238
—, Massage in ... ..	229
Hæmatocele periuterina ... ..	226
Hæmoptysis, Subcutaneous use of atropin in ... ..	38
Hæmorrhage, post partum, Plugging the uterus in ... ..	256
Hæmorrhagica, Puerpera ... ..	109
Hæmorrhoids, Treatment of, by dilatation ... ..	161
Hallux dolorosus ... ..	179
— flexus ... ..	179
— rigidus... ..	179
— valgus, Treatment of ... ..	179
Hammer-toe, Treatment of ... ..	178
Hare-lip, Modified operation for ...	194
Hay fever ... ..	311
Head-ache, continuous, Cannabis indica in ... ..	50
Heart, Acute dilatation of the, produced by alcoholism ... ..	1
—, dilated, Adonidine in ... ..	13
— disease, Calomel as a diuretic in ...	14
— —, Exercise in ... ..	4
— —, Strophanthus in ... ..	9
— —, The therapeutics of... ..	5
— -strain and weak heart ... ..	3
— -tonic and diuretic, Strophanthus as a ... ..	9
Hemicrania, Treatment of, by bromide of potassium ... ..	50
Hepatic phlebotomy ... ..	63
Hernia, Fatty ... ..	164

	PAGE
Hip, congenital dislocation of the, Treatment of ... ..	176
Hot-air baths as adjuncts to the mercurial treatment of syphilis ...	217
— douching in acute submucous laryngitis ... ..	309
— water in the treatment of diseases of the eye ... ..	281
Hydrogen, Peroxide of, in catarrhal affections ... ..	303
—, —, in disease of the ear ... ..	296
—, —, Therapeutic value of ... ..	280
—, Sulphuretted, by the mouth ...	35
Hyosine as a narcotic in renal diseases... ..	83
—, hydrochlorate of, Physiological action of ... ..	279
Hypnotics ... ..	54
Hypodermic injections, Cocaine for the prevention of the pain attendant on... ..	216
— treatment in syphilis in the French hospitals ... ..	216
Hypertrichosis ... ..	270
Hypospadias in the female, Cure of, by operation ... ..	204
Hysterical sneezing ... ..	311
Hysteromysotomies treated extra-peritoneally ... ..	236
Ichthyol ... ..	273
— and resorcin ... ..	274
Icterus, catarrhal, Intestinal irrigation in ... ..	65
Imperforate anus ... ..	197
Impetigo, Treatment of... ..	266
Incision, Palliative, in tubercular peritonitis ... ..	225
—, —, of tubercular peritonitis ...	223
Infant feeding ... ..	121
Infantile convulsions ... ..	123
Infants, Dyspepsia in ... ..	118
Infectious diseases, Treatment of ...	126
Injection, Goitre treated by ... ..	151
—, Removal of remains of cataract after operation by ... ..	285
Injections, Danger of ... ..	290
Insect bites... ..	271
Instruments, New, for use in ophthalmic practice ... ..	288
Intermittent treatment of syphilis ...	213
Intestine, Re-section of ... ..	170
—, wound of, Laparotomy for ... ..	166
Intraperitoneal injection of a saline solution ... ..	257
— injury, Laparotomy for the treatment of... ..	165
Intrapulmonary injection of iodoform ...	38
Intubation of the larynx ... ..	187
— — by O'Dwyer's method ... ..	305
— — in diphtheria ... ..	134
Iodides, Injections of preparations of, in syphilis ... ..	215
Iodine collodion, Gangrene caused by	272
Iodoform injection in cystitis... ..	207
—, Intrapulmonary injection of ...	38
—, is it an antiseptic? ... ..	138
— poisoning in surgical practice ...	138
Iodol, Treatment of diphtheria by ...	131

	PAGE		PAGE
Iritis, sympathetic, Treatment of ...	285	Lymphoid tissue as a cause of throat symptoms ...	304
Iron and carbolic acid, Treatment of diphtheria by ...	131	Magnesia, sulphite of, Treatment of diphtheria by ...	181
— in bronchitis and pneumonia ...	23	Malarial affection simulating Basedow's disease ...	16
—, perchloride of, Treatment of diphtheria by injection of ...	132	Malleus and membrana tympani, Excision of ...	294
Irrigation, Intestinal, in catarrhal icterus ...	65	Manipulations in spastic paralysis ...	43
Jambul in diabetes ...	88	Manual correction of occipito-posterior positions ...	247
Jaundice, Catarrhal ...	121	Massage ...	46
Jaw, Subluxation of, treatment by operation ...	148	— and electricity in chronic constipation ...	69
Joints, Gunshot injury of ...	164	— and morphia, Acute intestinal obstruction treated by ...	70
Juniper catgut, its uses in gynecological operations ...	238	— in gynecology ...	229
Keloid, Treatment of, by electrolysis ...	270	—, The technique of ...	229
Keratitis, parenchymatous, Treatment of severe ...	283	—, The use of, in diseases of the female pelvic organs ...	225
Knee, Excision of the ...	151	Mastoid process, On opening the ...	295
Knee-joint, Amputation at the ...	149	Measles and pregnancy ...	241
—, Effusion of blood into ...	147	—, Treatment of, by warm water ...	129
Knock-knee and bow-legs, Treatment of ...	186	Meatus externus, Closure of the ...	297
Labour, External pressure during, over the sacro-sciatic foramen ...	250	Mechanism and management of the third stage of labour ...	252
—, Mechanism and management of the third stage of ...	252	Median lithotomy ...	204
—, Premature ...	247	Medicated gelatines ...	275
Lacrymal apparatus, Treatment of diseases of the ...	283	Melanoderms ...	270
Lactic acid, Concentrated, in skin diseases ...	275	Membrana tympani and malleus, Excision of ...	294
Lanoline ...	272	— — Galvano-cautery for the ...	298
Laparotomies for various diseases ...	232	— —, The establishment of permanent fistulae of the ...	299
Laparotomy for gastric ulcer ...	168	Mercurial inflammation, Localised, of pharynx and tonsils ...	305
— for the treatment of intraperitoneal injury ...	165	— treatment of syphilis, Hot air baths as adjuncts to ...	217
— for typhoid ulcer ...	168	Mercury, absorption of, by the skin, Question as to ...	218
— for wound of the intestine ...	166	—, Carbolate of, in syphilis ...	214
— for wound of the stomach ...	167	—, is it an antidote to syphilis? ...	212
— in intestinal obstruction ...	169	—, long-continued administration of, Syphilis treated by ...	210
— in tubercular peritonitis ...	169	—, Treatment of syphilis by ...	209
Laryngeal phthisis, Treatment of ...	306	—, Volatilisation of, during inunction of the ointment ...	214
Laryngitis, acute submucous, Hot douching in ...	309	Middle ear, Novel methods of treating diseases of ...	292
Larynx, Intubation of ...	187	Milk as a food and remedy ...	58
—, —, by O'Dwyer's method ...	305	— diet, Treatment of scarlet fever by ...	129
—, Neuroses of the, analogous to writer's cramp, etc. ...	308	Molline ointment ...	277
Lichen planus, Treatment of ...	267	Morphia and massage, Acute intestinal obstruction treated by ...	70
Ligature of the inferior thyroid artery ...	153	Morphine in diabetes ...	86
Lithium and arsenic in diabetes ...	89	Mountain cure of phthisis ...	41
Litholapaxy in male children ...	204	Mouth, Sulphuretted hydrogen by ...	35
Lithotomy, Median ...	294	Myotomy and castration in fibroids ...	234
Liver capsule, Puncturing the ...	65	Myopia, Ætiology and treatment of ...	287
Local anæsthetics ...	142, 303		
— analgesics ...	53		
— applications in ocular therapeutics, Importance of ...	280		
Locomotor ataxia, Refrigeration in ...	53		
Loreta's method, Treatment of abdominal aneurysm by ...	156		
Lungs and pleura, affections of, Surgical treatment of ...	158		
Lupus erythematosus, Treatment of ...	268		
— vulgaris, Treatment of ...	268		
		Nasal polypi ...	311
		— symptoms, Disease of the antrum of Highmore as a cause of ...	310
		Naso-pharynx, fibrous tumours of, Treatment by electrolysis of ...	309
		Neck, wrv. Treatment of ...	181

	PAGE
Neoplasms, subglottic, Removal of ...	309
Nephritis, Treatment of... ..	78
Neuralgia, Salicylates in ... ..	49
Neuroses of the larynx analogous to writer's cramp, etc.... ..	308
Neurotic dyspepsia ... ..	60
Nitrate of silver in the deep urethra, with an improved instrument for its application ... ..	205
Nitrogen inhalation, Antithermic action of ... ..	127
Nocturnal enuresis ... ..	121
Nose, disease of the, Relation of oph- thalmic affections to ... ..	282
Nutrient suppositories ... ..	75
Nutritive value of peptonised enemata	71
Obstinately-recurring eczema, Treat- ment of... ..	265
Obstruction, Acute intestinal, treated by morphia and massage ... ..	70
—, intestinal, Laparotomy in ... ..	169
Occipito-posterior positions, Manual correction of ... ..	247
Ocular therapeutics, Importance of local applications in... ..	280
Ointment, Moline ... ..	277
Olecranon, Fracture of the ... ..	153
Open-air treatment of phthisis ... ..	28
Opening the mastoid process ... ..	295
Operation, Cure of hypospadias in the female by ... ..	204
—, Exploratory, and complete ova- riotomy... ..	230
—, Modified, for hare-lip ... ..	194
—, New, for trichiasis ... ..	282
—, Treatment of subluxation of the jaw by ... ..	148
Operations for stone in children ... ..	191
Ophthalmic affections, Relations of, to disease of the nose ... ..	282
— practice, New instruments for use in ... ..	288
Ophthalmotomy, Posterior, in glau- coma ... ..	285
Opium and belladonna in diabetes ... ..	88
Orchitis, Gouty, and gouty parotitis ... ..	105
Osteotomy, Treatment of rickets by... ..	186
Otitis media, Acute ... ..	290
Otophone, The ... ..	300
Ovariectomy, Complete, and explora- tory operation ... ..	230
Oxygen enemata ... ..	112
Oxygenated water, Treatment of diph- theria by ... ..	131
Paralysis, spastic, Manipulations in... ..	48
Paralytic varus, Operative treatment of... ..	174
Parenchymatous keratitis, Treatment of severe ... ..	283
Parotitis, Gouty, and gouty orchitis... ..	105
Pastes, Treatment of eczema by ... ..	264
Pediculi pubis ... ..	271
Pelvic abscesses, Drainage of, by tre- phining the ilium ... ..	143
— joints in the puerperal state ... ..	246
— organs, diseases of the female, The use of massage in ... ..	228

	PAGE
Pemphigus, Treatment of ... ..	267
Perambulators, Poisonous ... ..	124
Perflation, Treatment of empyema by	44
Perineal support, "Ritgen's man- œuvre" for ... ..	252
Perineum, how best guard it while the foetal head is passing ... ..	251
Peristalsis and the action of purga- tives ... ..	67
Peritoneal tuberculosis, A case of, cured ... ..	226
Peritonitis ... ..	71
—, tubercular, Laparotomy in ... ..	169
—, —, Palliative incision in ... ..	225
—, —, — of ... ..	223
Periuterina, Hæmatocele ... ..	226
Pharynx and tonsils, Localised mer- curial inflammation... ..	305
Phelps's open incision, Treatment of club-foot by ... ..	172
Phlebotomy, Hepatic ... ..	63
Photoxyl in the treatment of wounds... ..	140
Phthisis and diphtheria, Salol in ... ..	36
—, Aniline in ... ..	39
—, Antifebrin in ... ..	37
—, Injections of eucalyptol in ... ..	39
—, laryngeal, Treatment of ... ..	306
—, Mountain cure of ... ..	41
—, Open-air treatment of ... ..	28
—, Sulphuretted hydrogen injec- tions in... ..	29
—, Turpentine in ... ..	29
Physiological action of hydrochlorate of hyoscine ... ..	279
Piles, Treatment of, by excision ... ..	161
Pilocarpine, Treatment of diphtheria by ... ..	133
Placenta, retention of, after abortion, Treatment of ... ..	256
—, —, Treatment of... ..	255
Pleura and lungs, affections of, Sur- gical treatment of ... ..	158
Pleural cavity, should it be washed out? ... ..	42
Pleuritic exudation, Treatment of ... ..	43
Pneumonia, Acute ... ..	117
— and bronchitis, Iron in ... ..	23
—, Broncho- ... ..	117
—, General treatment of ... ..	24
—, Quinine in ... ..	26
Poisoning, Iodoform, in surgical prac- tice ... ..	133
Poisonous perambulators ... ..	124
Polypi, Nasal ... ..	311
Polypus of the tympanum, Treat- ment of... ..	297
Potassium, bromide of, Treatment of hemisrania by ... ..	50
—, Iodide of, and chloral in asthma	19
Pregnancy, Acute cystitis in ... ..	244
— and measles ... ..	241
—, Cholera in ... ..	242
—, Diabetes insipidus in ... ..	243
—, Goitre dependent upon ... ..	242
—, Tetany in ... ..	243
—, Typhoid fever in ... ..	242
—, Vomiting of ... ..	244
Premature labour... ..	247



	PAGE
Preparation of solutions of corrosive sublimate ... ..	140
Presentations, Brow ... ..	249
—, face, Interference in ... ..	248
Primary cardiac dilatation ... ..	2
Prophylaxis and treatment of syphilis ... ..	211
Pruritus vulvæ ... ..	272
— —, Therapeutics of ... ..	238
Psoas abscess, Treatment of ... ..	175
Psoriasis, Treatment of ... ..	267
Puberty in girls, Cardiac dilatation at ... ..	2
Pubis, Pediculi ... ..	271
Puerperal disease, Defective sanitation as a cause of ... ..	260
— septicæmia, General treatment of ... ..	260
— state, The pelvic joints in the ... ..	246
— uterus, Washing out the ... ..	260
Pulmonary disease, Rectal injection of gases in ... ..	31
— tubercle, Creosote in ... ..	40
Puncture of the heart in chloroform narcosis ... ..	15
Puncturing the liver capsule ... ..	65
Purgatives, Action of, and peristalsis ... ..	67
Puerpera hæmorrhagica ... ..	109
Pyrexia ... ..	113
Quinine in pneumonia ... ..	26
Quinsy ... ..	116
Rectal injection of gases in pulmonary disease ... ..	31
Refrigeration in locomotor ataxia ... ..	53
Removal of an exostosis ... ..	298
Renal calculus ... ..	93
— diseases, Hyoscyne as a narcotic in ... ..	83
— sarcoma in infancy ... ..	122
Re-section of intestine ... ..	170
— of ribs in certain cases of sero-fibrinous effusion ... ..	44
Resorein and ichthyol ... ..	274
—, Clinical studies on ... ..	273
Retention of placenta, Treatment of ... ..	255
Retina, Treatment of detachment of, by eserine ... ..	287
Retroversion of the gravid uterus ... ..	245
Rheumatism, Antifebrin in ... ..	99
—, Antipyrin in ... ..	99
—, Chronic articular ... ..	100
—, Gonorrhœal ... ..	100
—, Salicyl treatment of ... ..	95
—, Salol in ... ..	97
Rhinoscleroma ... ..	311
Rickets ... ..	123
—, Treatment of, by osteotomy ... ..	186
Rigidus, Hallux ... ..	179
"Ritgen's manœuvre" for perineal support ... ..	252
Rupture of the bladder ... ..	203
Sacro-sciatic foramen, External pressure over, during labour ... ..	250
Salicyl treatment of rheumatism ... ..	95
Salicylates in neuralgia ... ..	49
Saline solution, Intraperitoneal injection of a ... ..	257
Salol in phthisis and diphtheria ... ..	36

	PAGE
Salol in rheumatism ... ..	97
— in the treatment of wounds ... ..	140
Sandal-wood, Oil of, in foetid bronchitis ... ..	23
Sanitation, Defective, as a cause of puerperal disease ... ..	260
Santonin, How to prescribe ... ..	70
Sarcoma of the breast ... ..	146
—, Renal, in infancy ... ..	122
Scarlatina ... ..	114
Scarlatinal sore-throat, Treatment of ... ..	129
Scarlet fever, Treatment of, by milk diet ... ..	129
Septicæmia, puerperal, General treatment of ... ..	260
Sciatica ... ..	102
Sclerosis, initial, of syphilis, Excision of ... ..	208
Section, The improved Cæsarean ... ..	252
Sero-fibrinous effusion, Re-section of ribs in certain cases of ... ..	44
Serpiginous ulcer of the cornea, Treatment of ... ..	284
Shoulder dislocations, Reduction of ... ..	143
Skin diseases, Cocaine in ... ..	275
— —, Concentrated lactic acid in ... ..	275
Sneezing, Hysterical ... ..	311
Soda, benzoate of, and sulphide of calcium, Treatment of diphtheria by ... ..	133
Sore-throat, scarlatinal, Treatment of ... ..	129
Sparteine, Action and uses of ... ..	13
— in comparison with digitalis ... ..	13
—, Sulphate of ... ..	12
Spasmodic torticollis ... ..	123
Spinal curvature, Treatment of ... ..	185
— supports ... ..	184
Spine, lateral curvature of, Treatment of ... ..	181
Spleen pulp in anæmia ... ..	112
Stomach, Dilatation of ... ..	56
—, dilated, Death following shortly upon washing out ... ..	62
—, Ulcer of ... ..	61
—, wound of, Laparotomy for ... ..	167
Stone in children, Operations for ... ..	191
Strangling of typhoid fever ... ..	129
Stricture of the gullet, cancerous, Treatment of ... ..	163
Strophanthus as a heart-tonic and diuretic ... ..	9
— and its active principle ... ..	8
— in heart disease ... ..	9
—, Tincture of ... ..	9
Subglottic neoplasms, Removal of ... ..	309
Sulphate of sparteine ... ..	12
Sulphur in chlorosis ... ..	110
Sulphuretted hydrogen injections in phthisis ... ..	29
Summer diarrhœa ... ..	119
Supports, spinal ... ..	184
Suppositories, Nutrient ... ..	75
Suppuration of the middle ear ... ..	290
Supra-pubic cystotomy ... ..	199
Surgery, Corrosive sublimate in ... ..	139
Surgical treatment of affections of the pleura and lungs ... ..	158
— of internal aneurysms ... ..	153
Sympathetic iritis, Treatment of ... ..	285
Syphilis, Carbolate of mercury in ... ..	214

	PAGE		PAGE
Syphilis, Excision of the initial scler- osis of ... ..	208	Treatment of alopecia areata ... ..	272
—, General treatment of ... ..	208	— of anæmia and chlorosis ... ..	109
—, Hot-air baths as adjuncts to the mercurial treatment of ... ..	217	— of aneurysm ... ..	17
—, Hypodermic treatment of, in the French hospitals ... ..	216	— of ascites ... ..	70
—, infantile congenital, Treatment of ... ..	217	— of bent tibiæ ... ..	177
—, Injections of preparations of the iodides in ... ..	215	— of club-foot ... ..	171, 186
—, Intermittent treatment of ... ..	213	— of diseases of the lacrymal ap- paratus ... ..	283
—, Is mercury an antidote to? ... ..	212	— of eczema ... ..	263
—, On the various methods of treating ... ..	209	— of erysipelas ... ..	262
—, Prophylaxis and treatment of ... ..	211	— of flat-foot ... ..	174
— treated by long-continued ad- ministration of mercury ... ..	210	— of granular lids ... ..	283
—, Treatment of, by mercury ... ..	209	— of impetigo ... ..	263
—, —, by subcutaneous injections of calomel ... ..	215	— of infectious diseases ... ..	123
—, — the earliest stage of ... ..	211	— of lichen planus ... ..	267
Syphilitic patients, Dry hot-air baths for ... ..	217	— of lupus erythematosus ... ..	268
Talipes equinus, acquired, Treatment of, by new apparatus ... ..	172	— — vulgaris ... ..	268
Tannin as a dressing ... ..	141	— of nephritis ... ..	78
Tarsal bones, re-section of, Treatment of club-foot by ... ..	173	— of pemphigus ... ..	267
Technique of massage ... ..	229	— of pleuritic exudation ... ..	43
Temporal bone, Carcinoma of the ... ..	297	— of psoriasis ... ..	237
Tendon-grafting ... ..	152	— of retained chorion ... ..	255
Terpine in bronchorrhœa and other lung affections ... ..	23	— of some conjunctival affections ... ..	283
—, Hydrate of, in asthma ... ..	19	— of the earliest stage of syphilis ... ..	211
Tetany in pregnancy ... ..	243	— of typhoid fever ... ..	123
Therapeutic value of peroxide of hydrogen ... ..	280	— of uræmia ... ..	83
— — of recent additions to the genito-urinary pharmacopœia ... ..	207	— of wounds ... ..	137
Therapeutical action of drumine ... ..	279	Trephining the ilium, Drainage of pelvic abscesses by ... ..	143
Therapeutics of heart disease ... ..	5	Trichiasis, New operation for ... ..	282
— of pruritus vulvæ ... ..	238	Tropical diarrhœa ... ..	66
— of the uric-acid diathesis ... ..	103	Tuberculosis, Genital ... ..	221
Thirst ... ..	121	—, peritoneal, A case of, cured ... ..	226
Thoracic aneurysm ... ..	16	Tumours of the bladder ... ..	198
Throat symptoms, Lymphoid tissue as a cause of ... ..	304	—, malignant, Arsenic in the treat- ment of ... ..	144
Tibiæ, bent, Treatment of ... ..	177	Turkish baths, The value of, in diseases of the circulation ... ..	3
Tincture of strophanthus ... ..	9	Turning and delivery, Should there be an interval between? ... ..	251
Toe, great, Treatment of deformity of —, hammer-, Treatment of ... ..	178	Turpentine and gas tar, Treatment of diphtheria by ... ..	130
Torticollis, Spasmodic ... ..	123	Turpentine in phthisis ... ..	29
Trachea and bronchi, Local treatment of ... ..	307	—, oil of, Treatment of diphtheria by ... ..	129
Tracheotomy ... ..	190	Tympanum, polypus of the, Treat- ment of ... ..	297
—, Early treatment of diphtheria by ... ..	134	Typhoid fever in pregnancy ... ..	242
Traction, Use of, in the treatment of club-foot ... ..	172	— —, Strangling of ... ..	129
Transfusion, Saline, and subcutaneous blood injection ... ..	111	— —, Treatment of ... ..	128
Treating syphilis, On the various methods of ... ..	209	— —, —, by antifebrin ... ..	128
Treatment, Electrical ... ..	46	Ulcer, gastric, Laparotomy for ... ..	168
—, General, of pneumonia ... ..	24	— of the stomach ... ..	61
—, —, of syphilis ... ..	208	—, typhoid, Laparotomy for ... ..	168
— of acne ... ..	269	Ulcers, Antipyrin in the treatment of ... ..	141
— of acute bronchitis ... ..	20	Unilateral removal of the uterine appendages, Unsatisfactory re- sults of ... ..	230
		Uræmia, Treatment of ... ..	83
		Ureters, Catheterisation of ... ..	205
		Urethra, deep, Nitrate of silver in, with an improved instrument for its application ... ..	205
		Uric-acid diathesis, Therapeutics of ... ..	103
		Urine, Ammoniacal ... ..	85
		—, Retention of, treated by aspira- tion through a capillary catheter ... ..	205
		—, sterilising the, Boracic acid for ... ..	206

	PAGE		PAGE
Uterine and periuterine affections,		Volatilisation of mercury during in-	
Treatment of, by Apostoli's me-		unction of the ointment ... ..	214
thod ... ..	234	Vomiting ... ..	62
— appendages, unilateral removal		— of pregnancy ... ..	244
of, Unsatisfactory results of ...	230	Vulvæ, Pruritus ... ..	272
— fibroids, Galvanic treatment of ...	234		
Uterinum, eczema, Treatment of ...	263	Warm water, Treatment of measles	
Uterus, cancer of, Harveian lectures		by ... ..	129
on ... ..	236	Washed out, Should the pleural	
—, cancerous, Total extirpation of	236	cavity be? ... ..	42
—, —, vaginal total extirpation		Washing out a dilated stomach, Death	
of, Statistics of ... ..	237	following shortly upon ... ..	62
—, "Econvillonnage," or brushing		Wasting diseases, chronic, Fats and	
out the ... ..	256	fatty acids in ... ..	73
—, fibroid tumours of, Treatment		Water entering the ear, Risk incurred	
by electricity of ... ..	232	by ... ..	291
—, gravid, Retroversion of . ...	245	Weak heart and heart-strain ... ..	3
—, Plugging the, in post-partum		Whooping cough ... ..	116
hæmorrhage ... ..	256	Wounds. Sub-iodide of bismuth for ...	141
—, puerperal, Washing out the ...	260	—, Treatment of ... ..	137
Vagus, Pressure of aneurysm upon ...	18	—, —, Photoxylin in ... ..	140
Valgus, hallux, Treatment of ... ..	179	—, —, Salol in ... ..	140
Version, External, in breech presenta-		Wry neck, Treatment of ... ..	181
tions ... ..	250		
Varus, paralytic, Operative treatment		Zinc, Cyanide of, in cardiac cases ...	15
of... ..	174		





AN IMPORTANT CLASS OF PREPARATIONS.

# PARVULES

W. R. WARNER & CO. (Registered).

You are cautioned against imitations and substitutions offered under other names.

*The Lancet* reports:—"Parvules are elegant in appearance, and are sure to be favourites with children. We have tried several varieties and find that they are active. They are put up in pocket cases, each containing twenty varieties, a convenient form for practitioners in the country. It should be remembered that the doses are small and will have to be frequently repeated."

This is a new class of medicines (minute pills) designed for the administration of small doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses given at short intervals exert a more salutary effect. The elegance and efficiency of Parvules leave nothing to be desired. The dose of any of the Parvules will vary from one to four, according to age or the frequency of their administration. For instance, one Parvule every hour, or two every two hours, or three every three hours, and so on for adults. For children, one three times a day is the minimum dose.

Price to the Profession, 1s. per Bottle of 100 each. Pocket Cases, with 20 Varieties, for the use of Practitioners, 24s. Ditto, with 10 Varieties, 12s.

SUPPLIED BY ALL DRUGGISTS, OR SENT BY MAIL ON RECEIPT OF PRICE.

Acidi Arseniosi ... 1-100 gr. Medical properties—Alterative, Anti-periodic.	Ergotinæ ... 1-10 gr. Med. prop.—Emmenagogue, Parturient.
Acidi Salicylici ... 1-10 gr. Med. prop.—Anti-rheumatic.	Ferri Redacti ... 1-10 gr. Med. prop.—Tonic.
Acidi Tannici ... 1-20 gr. Med. prop.—Astringent.	Gelsemini Rad. ... 1-50 gr. Med. prop.—Nervous and Arterial Sedative.
Aconiti Rad. ... 1-20 gr. Med. prop.—Narcotic, Sudorific.	Hydrarg. Bi-Chlor. ... 1-100 gr. Med. prop.—Mercurial, Alterative.
Aloin ... 1-10 gr. Med. prop.—A most desirable Cathartic.	Hydrarg. cum Creta ... 1-10 gr. Med. prop.—Alterative
Aluminis ... 1-10 gr. Med. prop.—Astringent.	Hydrarg. Iodid. ... 1-20 gr. Med. prop.—Alterative.
Ammonii Chloridi ... 1-10 gr. Med. prop.—Diuretic, Stimulant.	Hydrastin ... 1-20 gr. Med. prop.—Tonic, Astringent.
Antimonii et Potass. Tart. ... 1-100 gr. Med. prop.—Expectorant, Alterative.	Iodoformi ... 1-10 gr. Med. prop.—Alterative.
Arnice Flor. ... 1-5 gr. Med. prop.—Narcotic, Stimulant, Diaphoretic.	Ipecac. ... 1-50 gr. Med. prop.—Emetic, Expectorant.
Arsenici Iodidi ... 1-100 gr. Med. prop.—Alterative.	Morphiæ Sulph. ... 1-50 gr. Med. prop.—Narcotic, Sedative.
Belladonnæ Fol. ... 1-20 gr. Med. prop.—Narcotic, Diaphoretic, Diuretic.	Nucis Vomiceæ ... 1-50 gr. Med. prop.—Tonic, Stimulant.
Camphoræ ... 1-20 gr. Med. prop.—Diaphoretic, Carminative.	Opii ... 1-40 gr. Med. prop.—Narcotic, Sedative, Anodyne.
Cantharidis ... 1-50 gr. Med. prop.—Diuretic, Stimulant.	Phosphorus ... 1-200 gr. Med. prop.—Nerve Stimulant.
Calomel ... 1-20 gr. Med. prop.—Alterative, Purgative.	Piperinæ ... 1-20 gr. Med. prop.—Tonic, Anti-periodic, Carminative.
Capsici ... 1-20 gr. Med. prop.—Stimulant and Carminative.	Podophyllini ... 1-40 gr. Med. prop.—Cathartic, Cholagogue.
Cathartic Comp. } ... 1-3 gr. Official ... } Med. prop.—Cathartic.	Potass. Bromidi ... 1-5 gr. Med. prop.—Alterative, Resolvent.
Cathartic Comp. } ... 1-3 gr. Improved ... } Med. prop.—Cathartic.	Potass. Arsenitis ... 1-100 gr. Med. prop.—Alterative.
Digitalis Fol. ... 1-20 gr. Med. prop.—Sedative, Narcotic, Diuretic.	Potass. Nitratis ... 1-10 gr. Med. prop.—Diuretic and Refrigerant.
Dover's Powder ... 1-3 gr. Med. prop.—Anodyne, Soporific.	Quiniæ Sulphatis ... 1-10 gr. Med. prop.—Tonic, Anti-periodic.
	Santonini ... 1-10 gr. Med. prop.—Anthelmintic.
	Strychniæ ... 1-100 gr. Med. prop.—Nerve Stimulant, Tonic.

PREPARED ONLY BY WM. R. WARNER & CO., PHILADELPHIA.

Ingluvin, Parvules, and other Pharmaceutical Preparations by W. R. WARNER & Co., may be obtained of all the principal Chemists. [7

Sole Depot in Great Britain—F. NEWBERY & SONS (125 Years in St. Paul's Churchyard), 1, King Edward St., London, E.C.

# NEPENTHE.

OR

## ANODYNE TINCTURE.

PREPARED EXCLUSIVELY FROM OPIUM.

MESSRS. FERRIS & CO. beg respectfully to direct the attention of the Medical Profession to the following letter, which they have received, among many others, speaking in very high terms of the value of their Preparation, NEPENTHE:—

PRESCOT VILLA, BASCHURCH, SALOP,  
Dec. 26th, 1887.

GENTLEMEN,—I have used your *Nepenthe* for several years. I believe it to be especially indicated in diseases of the urinary system, and find its action as an anodyne superior to that of Hyoscyamus, Belladonna, or their preparations. Nephralgia and the cystitis caused by the presence of a stone in the bladder are invariably relieved by it; I have administered *Nepenthe* frequently, in cases of stone, to allay painful symptoms until an operation could be performed. I prefer its internal exhibition to the hypodermic use of Morphia, as *Nepenthe* leaves no after effect on the digestive system. A long-standing case of ulceration in the bladder in a female, in which I have used every remedy I know of, both locally and internally, is always relieved by a 40 min. dose of *Nepenthe*. In strangury, acute and chronic cystitis, abnormal and malignant growths, also in that rare form of disease, tubercular disease of the bladder, I always find *Nepenthe* a safe and sure "pain killer."

I am Gentlemen, your obedient Servant,

(Signed) CECIL A. CORKE,  
Fell. Fac. Phys. and Surgs., L.R.C.P., L.S.A. Lond.

NEPENTHE may be used with perfect safety in every case where an opiate is indicated, and from the peculiar process by which it is prepared, it is deprived of all constituents which render the Tinctura Opii and other forms of opium, in very numerous instances, wholly inadmissible. It is also of uniform strength, and in this respect possesses high advantages.

NEPENTHE does not produce headache, stupor, giddiness, depression of spirits, diminution of nervous energy, prostration of strength, nor constipation; but induces natural and refreshing sleep.

*Dose*.—THE SAME AS THAT OF TINCTURA OPII. Price 8s. per lb.

SOLE MANUFACTURERS—

**FERRIS, BOORNE, TOWNSEND, & BOUCHER,**  
WHOLESALE AND EXPORT DRUGGISTS,  
**BRISTOL.**

NOTICE.—Messrs. FERRIS & CO., are the ONLY Manufacturers of *Nepenthe*, and Medical Gentlemen are especially cautioned against using any preparation which does not bear their name and label.

*NEPENTHE* is Registered under the Trade Marks Act, and protected by a facsimile of their signature pasted over each cork, and is sent out in bottles, bearing a label in white letters, upon a green ground.

# CHARING CROSS HOSPITAL MEDICAL SCHOOL.

THE HOSPITAL has a service of 230 Beds for Clinical Teaching, including those of the adjoining Royal Westminster Ophthalmic Hospital, to which general Students are free.

TWO ENTRANCE SCHOLARSHIPS, of the value of 100 Guineas and 50 Guineas respectively, are awarded annually in October, and can be competed for by gentlemen joining in the Summer Session.

FEES.—For the curriculum of study required by the various examining bodies and hospital practice, 90 Guineas in one sum, or 100 Guineas in five instalments. The Composition Fee for Dental Surgery is £42 2s., payable in two instalments.

\* \* The hours of Lectures have been specially re-arranged to suit the convenience of Dental Students. Charing Cross Hospital is within three minutes' walk of the Dental Hospital of London.

PRELIMINARY SCIENCE INSTRUCTION.—Arrangements have been made for Students desirous of undergoing a course of Instruction in Science, such as that required for the Preliminary Scientific (M.B.) Examination of the University of London, to attend at the Normal School of Science, South Kensington.

A Prospectus, containing much additional information, will be forwarded on application to the Librarian and Secretary, Mr. J. FRANCIS PINK, who attends daily at the Office of the School, Chandos Street, Charing Cross, between the hours of Ten and Four.

J. MITCHELL BRUCE, M.A., M.D., DEAN. [8

## UNIVERSITY OF EDINBURGH.

### FACULTY OF MEDICINE.

The Winter Session begins in the middle of October, and the Summer Session at the beginning of May.

MATERIA MEDICA.. .. .	PROF. THOMAS R. FRASER, M.D.
CHEMISTRY .. .. .	PROF. CRUM BROWN, M.D.
SURGERY .. .. .	PROF. CHIENE, M.D.
INSTITUTES OF MEDICINE OR PHYSIOLOGY ..	PROF. RUTHERFORD, M.D.
MIDWIFERY AND DISEASES OF WOMEN AND } CHILDREN .. .. .	PROF. SIMPSON, M.D.
CLINICAL SURGERY .. .. .	PROF. A. NANDALE, M.D.
CLINICAL MEDICINE .. .. .	PROFS. GRAINGER STEWART, FRASER, AND GREENFIELD, AND PROF. SIMPSON ON DISEASES OF WOMEN.
ANATOMY .. .. .	PROF. SIR WILLIAM TURNER, M.B.
PRACTICE OF PHYSIC .. .. .	PROF. GRAINGER STEWART, M.D.
GENERAL PATHOLOGY .. .. .	PROF. GREENFIELD, M.D.
ANATOMICAL DEMONSTRATIONS .. .. .	PROF. SIR W. TURNER, M.B.
BOTANY .. .. .	(Vacant.)
NATURAL HISTORY .. .. .	PROF. EWART, M.D.
MEDICAL JURISPRUDENCE .. .. .	PROF. SIR DOUGLAS MACLAGAN, M.D.

Royal Infirmary, at noon, Daily.

### LECTURERS.

MENTAL DISEASES .. .. .	T. S. CLOUSTON, M.D.
DISEASES OF THE EYE.. .. .	D. ARGYLL ROBERTSON, M.D.
CLINICAL INSTRUCTION ON DISEASES OF } CHILDREN .. .. .	JAMES CARMICHAEL, M.D., AND C. E. UNDERHILL, M.D.
COMPARATIVE EMBRYOLOGY.. .. .	GEORGE BROOK.
PHILOSOPHY OF NATURAL HISTORY .. .. .	G. J. ROMANES, M.A., LL.D.

Practical Instruction is afforded in Laboratories, furnished with all the necessary Appliances, and in Tutorial and Practical Classes, in connection with the above Chairs, and under the superintendence of the Professors.

Information as to Matriculation and the Curricula of Study for Degrees, Examinations, &c., may be obtained on application to the Dean of the Faculty of Medicine, and full details are given in the "University Calendar," published by JAMES THIN, Edinburgh.

By Authority of the Senatus.

JOHN KIRKPATRICK, Sec. Sen. Acad.

University of Edinburgh, November, 1887.



# CATALOGUES

OF

## Cassell & Company's Publications,

*Which may be had at all Booksellers', or will be sent  
post free on application to the Publishers.*

CASSELL'S COMPLETE CATALOGUE, containing particulars of upwards of ONE THOUSAND Volumes, with a Synopsis of their numerous Illustrated Serial Publications.

CASSELL'S CLASSIFIED CATALOGUE, in which their Works are arranged according to price, from *Threepence to Twenty-five Guineas*.

CASSELL'S GIFT-BOOKS CATALOGUE, containing particulars of Volumes suitable for Presentation.

CASSELL'S EDUCATIONAL CATALOGUE, containing a list of their School Books and Students' Manuals.

CASSELL'S PRIZE BOOKS CATALOGUE, containing particulars of Selected Volumes suitable for School Prizes, Rewards, Presentation, &c.

---

*CASSELL & COMPANY, Limited, Ludgate Hill, London.*

# HARPENDEN HALL, HERTS.

Twenty-five miles from London, on the Midland Railway. Established 1846, for the treatment and cure of Ladies mentally afflicted. Carriage Exercise, Lawn Tennis, and other Amusements are provided. Terms from Two GUINEAS A WEEK.

*Apply to*

[6

A. MACLEAN, L.R.C.S. Ed., L.S.A., Proprietor and Medical Superintendent.

## NORTH LONDON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, MOUNT VERNON, HAMPSTEAD, N.W.

OUT-PATIENTS' DEPARTMENT AND OFFICE, 216, TOTTENHAM COURT ROAD, W.

(Established 1860.) Patients admitted from all parts of the United Kingdom.

*Chairman of General Committee:* BENJAMIN A. LYON, Esq., Uplands, Hampstead.

*Vice-Chairman:* THE RIGHT HON. LORD ROBARTES, 30, Upper Grosvenor Street, W.

This Hospital for Consumption has special claims on the public. It has verified the correctness of the opinion now generally received that a lofty altitude combined with a dry bracing air, such as Hampstead affords, materially assists in arresting the progress of disease in advanced cases, and in completing recovery in less advanced stages of Consumption. The Committee would be pleased to gratify the wishes of any Donors who would like to endow and name a Ward or Single Bed for their own Patients. Subscriptions and Donations will be thankfully received by the Treasurer, 37, Fleet Street, E.C.; by the Secretary, at the Office, 216, Tottenham Court Road, W.; or by any of the following bankers: Messrs. Coutts & Co., Strand, W.C.; Messrs. Hoare, Fleet Street, E.C.; London and County Bank, Hanover Square, W.C.

ALFRED HOARE, *Treasurer.*

LIONEL HILL, M.A., *Secretary.*

[81

[Telephone No. 637.

## LONDON FEVER HOSPITAL, LIVERPOOL ROAD, N.,

FOR THE

Treatment of SCARLET FEVER, TYPHUS, TYPHOID, DIPHTHERIA,  
MEASLES, and all other Contagious Fevers.

Founded 1802.

PATRON—H.R.H. THE PRINCE OF WALES.

PRESIDENT—THE EARL OF DEVON.

TREASURER—SIR R. N. FOWLER, BART., M.P.

HON. SECRETARY—C. J. STEWART, Esq.

SECRETARY—MAJOR W. CHRISTIE, at the Hospital.

The LONDON FEVER HOSPITAL affords Absolute Safety from the spread of disease by patients suffering from contagious fever, by admitting them into its wards, and there isolating them. The Admission Fee is Three Guineas, which pays for as long a period of treatment and nursing as may be necessary, generally six weeks. This fee covers only about a fourth of the cost; the remainder is borne by the Charity.

Special Privileges to Governors.—Governors have the privilege of Free Admission for their own Domestic Servants. An Annual Subscriber of One Guinea, after the second payment, or a Donor of £10 10s. in one sum, becomes a Governor.

For an Annual Subscription of £2 2s., Firms, Clubs, and Hotels are entitled to send one employé to the Hospital free of cost; for an Annual Subscription of £4 4s., two employés; and for an Annual Subscription of £5 5s., three employés.

There is private Accommodation for those who may require it at £3 3s. per week.

Nearly 1,000 patients have been treated this year (1887).

### FUNDS ARE MOST URGENTLY NEEDED

Not only to carry on this useful work, but to enable the Committee to build extra accommodation, suitable to the requirements—medical and otherwise of the present day.

## *Cassell & Company's Volumes.*

---

### Manuals for Students of Medicine.

Embodying the most recent discoveries, and presenting them to the reader in a cheaper and more portable form than has till now been customary in Medical Works.

The Manuals contain all the information required for the Medical Examinations of the various Colleges, Halls, and Universities in the United Kingdom and the Colonies.

---

Price 6s.

### Elements of Histology.

By E. KLEIN, M.D., F.R.S., Joint-Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London.

*This work has already passed through several Editions, and has been translated into French, German, and Spanish.*

---

Price 7s. 6d.

### Surgical Pathology.

By A. J. PEPPER, M.B., M.S., F.R.C.S., Surgeon and Teacher of Practical Surgery at St. Mary's Hospital.

---

Price 7s. 6d.

### Surgical Applied Anatomy.

By FREDERICK TREVES, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, the London Hospital.

---



Manuals for Students of Medicine—*Continued.*

---

Price 5s.

## Clinical Chemistry.

By CHARLES H. RALFE, M.D., F.R.C.P., Assistant Physician  
at the London Hospital.

---

*New and Enlarged Edition, price 7s. 6d.*

## Human Physiology.

By HENRY POWER, M.B., F.R.C.S., Examiner in Physiology,  
Royal College of Surgeons of England.

---

*New and Enlarged Edition, price 7s. 6d.*

## Materia Medica and Therapeutics.

An Introduction to Rational Treatment.

By J. MITCHELL BRUCE, M.D., F.R.C.P., Lecturer on Materia  
Medica at Charing Cross Medical School, and Physician to  
the Hospital ; Examiner in Materia Medica in the University  
of London.

---

Price 7s. 6d.

## Physiological Physics.

By J. MCGREGOR-ROBERTSON, M.B., Muirhead Demon-  
strator of Physiology, University of Glasgow.

---

CASELL & COMPANY, LIMITED, *Ludgate Hill, London.*

Manuals for Students of Medicine—*Continued.*

---

Price 7s. 6d.

## Surgical Diagnosis: A Manual for the Wards.

By A. PEARCE GOULD, M.S., M.B., F.R.C.S., Assistant  
Surgeon to Middlesex Hospital.

---

Price 7s. 6d.

## Comparative Anatomy and Physiology.

By F. JEFFREY BELL, M.A., Professor of Comparative  
Anatomy at King's College.

---

## Forensic Medicine.

By A. J. PEPPER, M.S., M.B., F.R.C.S., Examiner in Forensic  
Medicine to the University of London.

---

*OTHER VOLUMES WILL FOLLOW IN DUE COURSE.*

---

# Clinical Manuals

FOR

*PRACTITIONERS AND STUDENTS OF MEDICINE.*

Consisting of Original, Concise, and Complete Monographs on all the Principal Subjects of Medicine and Surgery, both general and special. With numerous Illustrations in each, and strongly bound in cloth.

“The most important encyclopædia of medicine and surgery in the English language.”—*British Medical Journal*.

---

Now Ready, with **Eight Coloured Plates**, price **9s.**

## Diseases of the Breast.

By THOMAS BRYANT, F.R.C.S., Senior Surgeon to, and Lecturer on Surgery at, Guy's Hospital.

---

*NOW READY*, with **Four Coloured Plates**, price **9s.**

## Diseases of the Rectum and Anus.

By CHARLES B. BALL, M.Ch. (Dublin), F.R.C.S.I., Surgeon and Clinical Teacher at Sir P. Dun's Hospital.

---

With **Eight Coloured Plates**, price **9s.**

## Syphilis.

By JONATHAN HUTCHINSON, F.R.S., F.R.C.S., Consulting Surgeon to the London Hospital and to the Royal London Ophthalmic Hospital.

---



Clinical Manuals—*Continued.*

---

*NOW READY*, price 9s.

## Ophthalmic Surgery.

By R. BRUDENELL CARTER, F.R.C.S., Ophthalmic Surgeon to, and Lecturer on Ophthalmic Surgery at, St. George's Hospital; and W. ADAMS FROST, F.R.C.S., Assistant Ophthalmic Surgeon to, and Joint Lecturer on Ophthalmic Surgery at, St. George's Hospital.

---

With Chromo Plate, price 9s.

## Diseases of Joints.

By HOWARD MARSH, F.R.C.S., Senior Assistant Surgeon to, and Lecturer on Anatomy at, St. Bartholomew's Hospital, and Surgeon to the Children's Hospital, Great Ormond Street.

---

Price 8s. 6d.

## Intestinal Obstruction.

By FREDERICK TREVES, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, the London Hospital.

---

With Eight Chromo Plates, price 9s.

## Diseases of the Tongue.

By H. T. BUTLIN, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital.

---

Clinical Manuals—*Continued.*

---

Price 8s. 6d.

## Insanity and Allied Neuroses.

By GEORGE H. SAVAGE, M.D., Medical Superintendent and Resident Physician to Bethlem Royal Hospital, and Lecturer on Mental Diseases at Guy's Hospital.

---

With Four Chromo Plates, price 9s.

## Surgical Diseases of Children.

By EDMUND OWEN, M.B., F.R.C.S., Surgeon to the Children's Hospital, Great Ormond Street, and Surgeon to, and Lecturer on Anatomy at, St. Mary's Hospital.

---

Price 8s. 6d.

## Fractures and Dislocations.

By T. PICKERING PICK, F.R.C.S., Surgeon to, and Lecturer on Surgery at, St. George's Hospital.

---

With Six Chromo Plates, price 9s.

## Surgical Diseases of the Kidney.

By HENRY MORRIS, M.B., F.R.C.S., Surgeon to, and Lecturer on Surgery at, Middlesex Hospital.

---

## The Pulse.

By W. H. BROADBENT, M.D., F.R.C.P., Physician to, and Lecturer on Medicine at, St. Mary's Hospital.

*OTHER VOLUMES WILL FOLLOW IN DUE COURSE.*

---

“This Manual of Surgery is unique of its kind.”—*Medical Press and Circular*.

*Complete in Three Volumes, price 7s. 6d. each.*

# A Manual of Surgery.

IN TREATISES BY VARIOUS AUTHORS.

EDITED BY

FREDERICK TREVES, F.R.C.S.,

*Surgeon to, and Lecturer on Anatomy at, the London Hospital; Hunterian Professor at the Royal College of Surgeons of England.*

The Work is published in three volumes, each consisting of about 600 pages, fcap. 8vo, extensively illustrated. It forms a complete, concise, and authoritative Treatise on the Science and Art of Modern Surgery.

---

“It would be almost impossible to find at present any work in which the subjects treated of are written more clearly or concisely. The editor has had a difficult task to accomplish in the production of this work, and we congratulate him on the successful result.”—*The Lancet*.

“It is undoubtedly one of the most compendious surgical works, and from the variety of its authorship may be considered somewhat representative of the surgical opinion of these islands. The illustrations are excellent.”—*Liverpool Medico-Chirurgical Journal*.

“Messrs. CASSELL, in issuing these volumes among their manuals for students of medicine, did wisely in invoking the aid of some thirty hospital surgeons, who have in these three handy volumes produced a very practical work of high excellence.”—*Nature*.

CASSELL & COMPANY, LIMITED, *Ludgate Hill, London;*

*Paris, New York & Melbourne.*



Price 21s. (demy 8vo, 432 pages).

# Memorials

OF THE

## Craft of Surgery in England.

FROM MATERIALS COMPILED BY

JOHN FLINT SOUTH,

*Twice President of the Royal College of Surgeons of England,  
and Surgeon to St. Thomas's Hospital.*

EDITED BY

D'ARCY POWER, M.A. Oxon., F.R.C.S. Eng.

WITH AN INTRODUCTION BY

SIR JAMES PAGET.

---

*With Coloured Plates and Wood Engravings.*

---

“The memorials will be equally valuable to the surgeon, the antiquarian, and the student of English life during the past three centuries.”—*British Medical Journal*.

“We do not know of any work so important as this in the interesting and accurate view it gives us of the craft of surgery in England, from the earliest time of which any records exist, to the year 1800, when the charter of the Royal College of Surgeons of London was obtained.”—*Glasgow Medical Journal*.

CASSELL & COMPANY, LIMITED, *Ludgate Hill, London; and all Booksellers.*

*Authoritative Work on Health by Eminent Physicians and Surgeons.*

# THE BOOK OF HEALTH.

Edited by MALCOLM MORRIS, F.R.C.S., Edin.

A Systematic Treatise for the Professional and General Reader upon the Science and the Preservation of Health. Cloth, 21s. ; roxburgh, 25s.

CHAP.

CONTENTS.

1. **Introductory.** By W. S. SAVORY, F.R.S.
2. **Food and its Use in Health.** By SIR RISDON BENNETT, M.D., F.R.S.
3. **The Influence of Stimulants and Narcotics on Health.** By T. LAUDER BRUNTON, M.D., F.R.S. [M.D.]
4. **Education and the Nervous System.** By Sir J. CRICHTON-BROWNE, LL.D.,
5. **The Influence of Exercise on Health.** By JAMES CANTLIE, F.R.C.S.
6. **The Influence of Dress on Health.** By FREDERICK TREVES, F.R.C.S.
7. **The Influence of our Surroundings on Health.** By J. E. POLLOCK, M.D.
8. **The Influence of Travelling on Health.** By J. RUSSELL REYNOLDS, M.D.,
9. **Health at Home.** By SHIRLEY MURPHY, M.R.C.S. [F.R.S.]
10. **Health in Infancy and Childhood.** By W. B. CHEADLE, M.D.
11. **Health at School.** By CLEMENT DUKES, M.D.
12. **The Eye and Sight.** By HENRY POWER, F.R.C.S.
13. **The Ear and Hearing.** By G. P. FIELD, M.R.C.S.
14. **The Throat and Voice.** By J. S. BRISTOWE, M.D., F.R.S.
15. **The Teeth.** By CHARLES S. TOMES, F.R.S.
16. **The Skin and Hair.** By MALCOLM MORRIS, F.R.C.S.E. [M.D.]
17. **Health in India.** By SIR JOSEPH FAYRER, K.C.S.I., F.R.S., and J. EWART,
18. **Climate and Health Resorts.** By HERMANN WEBER, M.D.

"The work is what it aims to be—authoritative—and must become a standard work of reference not only with those who are responsible for the health of schools, workshops, and other establishments where there is a large concourse of individuals, but to every member of the community who is anxious to secure the highest possible degree of healthy living for himself and for his family."—*Lancet*.

"An Encyclopædia of sanitation."—*Spectator*.

## OUR HOMES, AND HOW TO MAKE THEM HEALTHY.

With numerous Practical Illustrations. Edited by SHIRLEY FOSTER MURPHY, *Hon. Secretary to the Epidemiological Society, and to the Society of Medical Officers of Health.* 960 pages, royal 8vo, cloth, 15s. ; roxburgh, 18s.

CONTENTS.

- Health in the Home.** By W. B. RICHARDSON, M.D., LL.D., F.R.S.
- Architecture.** By P. GORDON SMITH, F.R.I.B.A., and KEITH DOWNES YOUNG, A.R.I.B.A.
- Internal Decoration.** By ROBERT W. EDIS, F.S.A., and MALCOLM MORRIS, F.R.C.S.E.
- Lighting.** By R. BRUDENELL CARTER, F.R.C.S.
- Warming and Ventilation.** By DOUGLAS GALTON, C.B., D.C.L., F.R.S.
- House Drainage.** By WILLIAM EASSIE, C.E., F.L.S., F.G.S.
- Defective Sanitary Appliances and Arrangements.** By PROF. W. H. CORFIELD, M.A., M.D.
- Water.** By PROF. F. S. B. FRANCOIS DE CHAUMONT, M.D., F.R.S.; ROGERS FIELD, B.A., M.I.C.E.; and J. WALLACE PEGGS, C.E.
- Disposal of Refuse by Dry Methods.** By THE EDITOR.
- The Nursery.** By WILLIAM SQUIRE, M.D., F.R.C.P.
- House Cleaning.** By PHYLLIS BROWNE.
- Sickness in the House.** By THE EDITOR.
- Legal Responsibilities.** By THOS. ECCLESTON GIBB.
- &c. &c.

A large amount of useful information concerning all the rights, duties, and privileges of a householder, as well as about the best means of rendering the home picturesque, comfortable, and, above all, wholesome."—*Times*.

CASELL & COMPANY, LIMITED, *Ludgate Hill, London ; and all Booksellers.*

## HOME FOR INVALID CHILDREN, 70, MONTEPELIER ROAD, BRIGHTON.

THIS Home has been established 32 years, with the object to diminish suffering and promote spiritual life. Dr. WITHERS MOORE and Mr. HUMPHREY undertake the Medical Treatment of the Patients. The Rev. E. L. ROXBYS is their Chaplain.

Payment for children, 8 shillings per week.

All Applications to be made to MISS FREEMAN, Hon. Sec.,  
70, Montpelier Road,

By whom Donations and Subscriptions will be thankfully received. [32

*Contributions are earnestly solicited in support of this Home.*

---

## HEALTH HANDBOOKS

BY EMINENT AUTHORITIES.

### *The Influence of Clothing on Health.*

By FREDERICK TREVES, F.R.C.S.

Price 2s.; post free, 2s. 3d.

"An admirable treatise, the subject being dealt with in a very thorough and interesting manner."—*The Hospital*.

### *The Eye, Ear, and Throat, The Management of.*

The Eye and Sight. By HENRY POWER, M.B., F.R.C.S.

The Ear and Hearing. By GEORGE P. FIELD.

The Throat, Voice, and Speech. By JOHN S. BRISTOWE, M.D., F.R.S.

Price 3s. 6d.; post free, 3s. 9d.

"Altogether this work is superior to any popular publication of its kind which has hitherto appeared."—*Athenæum*.

### *The Skin and Hair, The Management of.*

By MALCOLM MORRIS, F.R.C.S. EDIN.

Price 2s.; post free, 2s. 3d.

"Mr. Morris has written a book which may be perused with much profit, and will lead many people to change their habits with regard to their skin and hair."—*Court Circular*.

CASELL & COMPANY, LIMITED, *Ludgate Hill, London; and all Booksellers.*

---

Price 5s.

**Vaccination Vindicated.** An Answer to the leading Anti-Vaccinators. By JOHN C. McVAIL, M.D., D.P.H., Camb.; Physician to the Kilmarnock Infirmary; Medical Officer of Health, Kilmarnock, &c.

CASELL & COMPANY, LIMITED, *Ludgate Hill, London; and all Booksellers.*

---

Price 3s

**The Natural History of Cow-Pox and Vaccinal Syphilis.** By CHARLES CREIGHTON, M.D. Crown 8vo, cloth, lettered.

CASELL & COMPANY, LIMITED, *Ludgate Hill, London; and all Booksellers,*



# LETT'S DIARIES FOR 1888

*Are now on Sale at all Booksellers' and Stationers'.*

The following are Specially Adapted for the  
**MEDICAL PROFESSION.**  
**FOR THE POCKET.**

The Medical Diary contains information compiled expressly for the use of the profession, besides ruled pages for noting obstetric engagements, nurses' addresses, thermometrical or other fluctuations, monthly cash account, &c.

Diary, with visiting list each week for 54 patients' names, cloth, 2s. 6d.; leather tuck, 3s. 6d.; elastic band, 4s.; silk, 3s. 6d. Ditto, for 108 patients' names, cloth, 4s.; leather tuck, 5s.; elastic band, 5s. 6d.; silk, 5s.

## **FOR THE SURGERY.**

No. 51, foolscap folio, ruled for notes or with cash columns, one day to page, with Sundays and Index. Cloth, strongly bound, 14s.

No. 8, octavo, ruled for notes or with cash columns, one day to page (including Sundays), with index. Cloth, 6s. 6d.

Also "LETT'S MEDICAL LEDGER." Particulars and specimens on application.

"Letts's Diaries retain all the familiar features, both in substance and form, which entitle them to the boast of being *the best in existence*."—*Academy*.

"Letts's Diaries maintain in the hands of Messrs. Cassell their old reputation as thoroughly practical and sensible publications compiled with care. The 'Office Diary' and the 'Rough Diary' are in their various sizes quite models of their kind."—*Athenæum*.

\* \* \* *Purchasers should be careful to obtain the original and unrivelled LETT'S DIARIES, and see that they bear on the title-page the imprint of*

CASSELL & COMPANY, LIMITED, Ludgate Hill, London.

# THE FOOD OF FOODS.

## KEPLER MALT EXTRACT.

1. It contains no glucose, is uncontaminated, and free from any "doctored up taste."
2. It is not blackened with heat and chemicals, and its valuable proteids are, therefore, not precipitated.
3. It is prepared from the very best winter barley, and in no case are mixtures or inferior grains substituted therefor.
4. The freedom from a burnt or treacly taste and blackish appearance, is due to the fact that the Kepler Malt is evaporated in vacuo.
5. The Kepler Malt Extract contains everything that is of nutritive value in the barley, viz.:—

MALTOSE,	ALBUMENOIDS,	DIASTASE,
PEPTONES,	DEXTRINS,	PHOSPHATES, &c.
6. It is the most assimilable of all foods, as it contains only those ingredients adapted for the sustenance of tender plant life.
7. Its constituents are prepared by Nature for immediate utilisation, and thus their value in wasting disease.
8. From its carbohydrate being maltose—the most nutritive of sugars—the Kepler Extract does not sour on the stomach.
9. A little of it added to cows' milk gives it the requisite sweetness of mothers' milk; agrees well, and in infants is preventive of rickets.
10. Its diastase renders it digestive, constituting it, therefore, an aid to digestion as well as the most delicate food.
11. Freedom from coarse and irritating ingredients makes it the safest aliment in inflammatory conditions of disease.
12. It is further an admirable demulcent in irritable states of the throat.
13. Its greater solubility adapts it for administration in all kinds of nutritive or other drinks.
14. It may be mixed with dough, and beautiful rusks and other foods for invalids may be made thereby.
15. There is no such agreeable substitute for cod liver oil.
16. It is infinitely superior to all kinds of fermented malt, in which fermentation occurs of course at the expense of the desirable nutritive principles of the grain.
17. It is a delicious "tissue-forming," "force-producing," concentrated digestive food.

### NOTICE WELL.

"It speedily improves the power of assimilation, and in cases of consumption, scrofula, and many of the wasting diseases of children, a wonderful improvement in the patient's condition may be noticed after a fortnight's treatment."—*London Medical Record*. "The Kepler Extract of Malt is deserving of special commendation. It is by far the best we have seen."—*Medical Times and Gazette*. "It is as distinct an advance in Therapeutics," summed up the *Lancet* in its report, "as was the introduction of cod liver oil. It is one of our best nutritive and digestive agents for atonic dyspepsia, and is undoubtedly useful in consumption and other wasting diseases."

## KEPLER SOLUTION OF COD LIVER OIL IN MALT EXTRACT.

1. In giving Kepler Solution cod liver oil is taken on the same plan as butter—with another food. For who would prescribe butter by itself for invalids, and that an hour after meals?
2. It is incalculably preferable to all emulsions, which are impracticable and unscientific, disregarding, as they do, every principle of dietetics; no one ventures to prescribe butter for patients with alkalies, gums, essential oils, and the like, in preference to giving it with the food.
3. Though cod liver oil is the most digestible of all oils, experiments are said to have proved that in nine cases out of ten cod liver oil is *not* fully assimilated, and is frequently voided unchanged. It is needless to add that under such circumstances the digestive apparatus is unduly tried. All this misfortune is impossible with the Kepler Solution, in which the natural process of digestion is so closely imitated that the oil is readily taken up by the lacteals.
4. Finally—"... The Kepler mixture of Cod Liver Oil and Malt Extract is *not* an Emulsion, but its constituents are in a condition of more intimate admixture, namely, that of Solution" (Prof. Clayton in *Journal of Public Analysts*).
5. It is "*an ideal form for the administration of fat.*"—*British Medical Journal*.  
Supplied in  $\frac{3}{4}$ -lb. and  $1\frac{1}{2}$ -lb. bottles, at 1s. 10d. and 3s. 2d. each.

## PEPTONISING POWDERS (FAIRCHILD).

The advantages of these are, that when everything is taken into account, they simply stand alone in the world of ferments for peptonising milk for invalids, dyspeptics, the aged, and infants. Speaking of Fairchild's discovery of Zymine, Dr. Keating said: "I feel satisfied that the question of infant feeding is solved."  
Supplied in boxes of 1 dozen Tubes, at 1s. 10d. per box.

*May be obtained from all Dispensing and Wholesale Chemists throughout the World.*

BURROUGHS, WELLCOME & CO., Snow Hill Buildings, LONDON, E.C.



# THE NIGHTINGALE FUND.

## THE COUNCIL.

SIR WM. BOWMAN, BART, F.R.S.  
SIR J. F. CLARK, BART.  
WILLIAM RATHBONE, Esq., M.P.

THE RIGHT HON. SIR HARRY VERNEY,  
BART.  
SIR WM. H. WYATT.

## SECRETARY.

HENRY BONHAM-CARTER, Esq., 5, Hyde Park Square, W.

### REGULATIONS AS TO THE TRAINING OF HOSPITAL NURSES AT ST. THOMAS'S HOSPITAL.

1. Candidates should apply to Miss PRINGLE, the Matron, at St. Thomas's Hospital, subject to whose selection they will be received into the Hospital as Probationers. The age considered desirable for Probationers is from 25 to 36, single, or widows without encumbrance.

2. The Probationers will be under the authority of the Matron of the Hospital, and will serve for one year as Assistant Nurses in the Wards.

3. They will be supplied with separate lodging in the Hospital, with board and washing, and with a certain quantity of outer clothing; and they will be paid a sum of £12 during the year.

4. At the close of a year their training will be complete, and they will be required to enter into service as Hospital Nurses in such situations as may be offered to them.

5. Gentlewomen (age from 26 to 36) are admitted, under Special Regulations, who desire to qualify themselves in the practice of Nursing, with a view to become Matrons, Superintendents, or Hospital Sisters, or to engage in District Nursing.

Candidates are received on the usual quarter days, if there are vacancies. Application should be made personally to Miss PRINGLE, St. Thomas's Hospital, London, S.E., at 11 A.M. on Tuesday or Friday, and she will supply both Regulations on written application. [30]

---

## DR. APOSTOLI'S Method of Treating Uterine Fibroids

BY

### *Electrolysis and the Faradaic Current.*

Vide also Dr. STEAVENSON'S Papers on the Treatment of Strictures of the Urethra, Rectum, Œsophagus, Auditory Canal, &c,

---

FOR PARTICULARS APPLY FOR NEW PRICE LIST OF  
ACIDLESS MEDICAL BATTERIES, MEDICO-ELECTRICAL  
APPARATUS and APPLIANCES,

TO

**COXETER & SON,**  
Surgical, Deformity, & Electrical Instrument Makers,  
4 & 6, GRAFTON STREET, GOWER STREET,  
**LONDON, W.C.**



# Bailey's Hydrostatic Douche AND ENEMA;

*As used at the General Lying-in Hospital, Queen Charlotte's  
Lying-in Hospital, and many others.*



This is cheap, simple, useful, and portable, consists of an open reservoir with long india-rubber tube and vulcanite stop-cock, to which any suitable tube can be attached.

**VAGINAL DOUCHE.**—Its safety from absence of back suction commends its use strongly in the Lying-in Chamber.

**ENEMA.**—It is equally applicable as an Enema, as no air can be injected, which is often a source of pain and inconvenience with the ordinary Syringes.

**NOSE DOUCHE.**—For Hay Fever, &c., it can be fitted with a tube for the Nose, and forms an excellent Douche.

1 Pint Reservoir, 8/6; 2 Pint, 10/6; 4 Pint, 12/6.

Postage, 5d. extra.

## BAILEY'S PATENT ABDOMINAL BELTS,

*Trusses, Elastic Stockings, Air Cushions.*

**WATER BEDS ON HIRE.**

Artificial Limbs, Crutches, and Articles generally for the use of Invalids. *Catalogues Free.*

**W. H. BAILEY & SON,**

38, OXFORD STREET, LONDON. [24

*Seventh and Cheap Edition. Price 1s. 6d.; cloth, 2s.*

**A HANDBOOK OF NURSING.** For the Home and for the Hospital. By CATHERINE J. WOOD, *Lady Superintendent of the Hospital for Sick Children, Great Ormond Street.*

CASSELL & COMPANY, LIMITED, *Ludgate Hill, London; and all Booksellers.*

*New and Revised Edition. 1,088 pages, royal 8vo, price 21s.*

**THE FAMILY PHYSICIAN.** A Manual of Domestic Medicine.

By Eminent Physicians and Surgeons of the Principal London Hospitals.

“‘The Family Physician’ is a book which ought to have a place in every household, and its contents should be pondered by the heads of families.”—*Court Journal.*

“The volume is likely to be of great and permanent use. . . . It teaches its readers not only how to cure certain diseases according to general rules, but, what is much more important, how to avoid them. The book is distinguished throughout by excellent sense and very clear writing.”—*Saturday Review.*

CASSELL & COMPANY, LIMITED, *Ludgate Hill, London; and all Booksellers.*

*Seventh Edition. Extra fcap. 8vo, cloth, 6s.*

**THE LADIES' PHYSICIAN.** A Guide for Women to the Treatment of their Ailments. By a London Physician.

“The statements are accurate, the opinions sound, and the advice judicious.”—*Medical Times.*

CASSELL & COMPANY, LIMITED, *Ludgate Hill, London; and all Booksellers.*



